

M I L I T A R Y
MEMOIRS and MAXIMS
La Tour d'Auvergne (H. de
 O F
de
Marshal T U R E N N E.

I N T E R S P E R S E D

With OTHERS, taken from the best AUTHORS
 and OBSERVATION, with REMARKS.

Particularly of

The Duty of a General.	Artillery, Ammunition, Guides,
The March of an Army.	Spies, &c.
Encampments, Retrenchments,	Fortified Places, Rules of For-
Forage, Guards, Alarms and	tification, Magazines.
Partisan Parties.	The Attack of a Place.
The Disposition of an Army.	Sieges, Trenches, Approaches.
General Battles.	Batteries, Mines, Breaches, &c.
Particular Battles, Ambuscades,	The Defence of a Place, before
Skirmishes and Surprizes.	and during a Siege.
Attacks of Lines or Intrench-	Sallies, Counter-Batteries,
ments.	Countermines, Succours, &c.

By A. W I L L I A M S O N,
 Major-General.

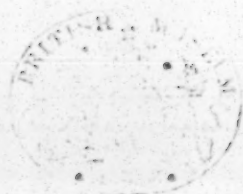
Aut nunquam tentes, aut perfice.

The Second EDITION.

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17/3



TO THE
KING.

SIR,

AN ardent Desire to be
deemed, even in the
smallest degree, a useful
Subject to Your MAJESTY,
prompted me to publish
these Military Maxims, and

A 2

to

D E D I C A T I O N.

to presume humbly to beg
leave to lay them at Your
Sacred MAJESTY'S Feet,
which is done with all pos-
sible Respect and Duty, by

May it please Your MAJESTY,

Your MAJESTY'S

Most Faithful

Most Devoted,

and

Most Obedient,

Subject and Servant,

12 EE 66

Adam Williamson.

P R E F A C E.

I Should not have hazarded the censure of my brother Officers on this Translation and Observations, which I here offer to them, were it not that I hope for their indulgence, and that it seems to me, there is a very great necessity at this time for publishing something of this kind for the instruction of the unexperienced.

A cessation of arms for twenty-eight years must unavoidably have been attended with the loss of most of our old Generals and Officers, and their posts at length fill'd with many who never served abroad. For the use of these this Collection is intended, and I hope (if what is here offer'd is not approved) some abler officer will soon give them fuller instructions,

A 3 which

vi P R E F A C E.

which for their sakes and my own improvement I should be very glad to see. Till this happens, let them put this book in their pockets: it will take little more room than their snuff-box, and if as often look'd into, will be of greater use to them; for every paragraph is a lesson: and as they are chiefly the maxims of the great Marshal *Turenne*, I hope they will sink deep in the memories of all who aspire to important commands; and that they may, it will not, I hope, be thought unseasonable, that I give here a short sketch of this able General, taken in greatest part from *Ramsay's* History of him.

He was the son of the Duke of *Bouillon* by *Elisabeth* of *Nassau*, daughter to *William* of *Nassau*, Prince of *Orange*.

His

P R E F A C E. vii

His classic learning was not considerable, but he had a fond desire to read History, and the Lives of those great men who had distinguished themselves by their military virtues. *Alexander's* character pleased him much : the passages and heroic actions in *Quintus Curtius* delighted him, and the repetition of them was always agreeable to him.

In the first years of his service, he was seldom seen, either in camp or garrison, without a pencil or measuring-rod in his hand. He served seventeen years under different Generals, before he commanded an army. The first year he carried a musket as a volunteer : he was four years a captain, four years a colonel, three years a major-general, and five years a lieutenant-general, and was the

viii *P R E F A C E.*

first of this rank the *French* King had ever made.

Nothing does him more honour than the acknowledgments he made of the obligations he lay under to each of his military masters. He used to say, that he had learn'd from his uncle *Henry* Prince of *Orange*, how to chuse a camp to advantage; to attack a town regularly; remotely to form a project, revolve it a long time in his thoughts, and let nothing of it appear till the moment of execution; to avoid ostentation, fill his mind with elevated sentiments, and to have a more ardent zeal for the good of his country than his own glory.

He was wont to say of the Duke of *Weymar*, That with nothing he did wonders, yet was never vain of his success: that when he had fallen into misfortunes,

P R E F A C E. ix

tunes, he did not lose time in complaining, but wholly applied his thoughts how to get out of them: that he chose rather to be unjustly blamed, than to excuse himself at the expence of his friends who had not perform'd well in the action: that he was more intent in repairing his fault, than in making useless apologies: and lastly, that he was much more desirous of being beloved, than fear'd by his soldiers.

He had observed under Cardinal *de Valette*, that a General who would be agreeable to his troops, must, on going into the field, renounce the false delicacies of a court-life, gallantry, and the amusements of wit and imagination, and live with the officers after their fashion, without ceremony or affectation.

By

x P R E F A C E.

By seeing the conduct of Count *de Harcourt*, he was confirmed in *Cæsar's* grand Maxim, that of all military virtues, diligence and expedition are the most essential, and that they seldom fail of success when accompanied with prudence and circumspection.

He saw that all military expeditions were attended with such variety of unexpected accidents and circumstances, that he was used to say, He was the best General who committed the fewest faults or oversights.

This great man, after he had commanded with extraordinary success to the sixty-fourth year of his age, was killed by a cannon-ball from *Montecuculli's* army, and was buried by order of *Lewis XIV.* in the burying place of the Kings of *France* at *St. Denis*.

Monte-

P R E F A C E. xi

Montecuculli, so far from exulting when he heard of his death, appeared rather to lament, and said, There is a man dead, who was an honour to human nature. And a French author who pretended to know him well, says, that of all the men he ever had observed, Marshal *Turenne* seemed to him to come the nearest to perfection. Thus far his life.

Some things I have omitted to translate from the Marshal's Memoirs, seeing they related to the small detail of the troops and garrison duty, which are already so well set forth in Colonel *Bland's* Treatise of Military Discipline, which book should be carefully read by all young officers, before they attend to the study or consideration of these Maxims.

I must not here forbear to acknowledge my obligations to my
great

xii P R E F A C E.

great friend and patron, the late Lieutenant-General *Meredyth*, to whom I had the honour of being *Aid de Camp* in *Flanders*, and by him indulged frequently to ride out and see what was going forward in the army. This, with his instruction and my duty on other occasions, with the happiness of speaking the languages, joined to a strong curiosity to see and know all I could, gave me opportunities to make some Observations on what passed in the field and at sieges, which I have presumed to add, with Others from the best authors.

I have only to say, that no lucrative view prompted me to publish this little Book. I gave the Copy to Messieurs *Knapton* for their own sole advantage, and hope they will be no losers by it.

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12 EE 60

MILI-

MILITARY
M E M O I R S
A N D
M A X I M S, &c.

The Duty of a General.

HIS first care should be to implore the Divine assistance, to take counsel from his most experienced and faithful officers; and the better to succeed in what he undertakes, he is to keep his own secrets, to be diligent and resolute, to digest well his measures; to employ those in all important and bold enterprizes, who are the most willing and able to execute what he has projected; not to let slip any opportunity; to make himself well acquainted with

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the

the enemy's country ; their force, what front their troops will give, and to know precisely what succours they may expect ; not to let others perceive his fears or uneasinesses ; and to appear more gay than ordinary, even in the time of the most imminent danger.

And as obedience and discipline among the troops is one of the first means of obtaining victories, he must take care to see that this be punctually observed ; to reward those who do well, and to punish the bad ; to keep his troops to all their military duties and exercises, and not to suffer the least murmuring ; or if there be any, they should be immediately reprimanded or punished with severity ; for little murmurs frequently end in sedition, so that nothing should

should be neglected to prevent them.

After being thoroughly acquainted with his own army, a General is to foresee any thing that may happen, and to provide against it; to examine maturely every thing he undertakes, and what opposition he may expect from the enemy; and to act accordingly.

He ought to be acquainted with History, Geography, but above all, Topography, or the situation of the country which is, or is to be, the seat of war; what it produces; the genius and disposition of the inhabitants, their government, and what sort of dominion they like best; and what strong places they possess.

As care must be taken to avoid being encumbered with useless troops, he must always proportion

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the number of horse and foot, which is to compose his army, to the extent of the country that he is to conquer or defend.

Of Operations in general.

All your operations should be proportioned to your force. They may be reduced to these three heads: Either to attack a country by open force; to act on the defensive; or to succour an Ally. And in this you are to observe, that a close country is most advantageous for your infantry, and an open country for your horse: that in sieges your infantry only is of use, the cavalry doing little more than cutting and bringing fascines to the tail of the trenches, and forming a grand guard in case of sallies from the town.

If

If you give battle, your army should be stronger than the enemy's ; and if there be a civil war, endeavour to be called to the assistance of one side.

Always act with complaisance to your enemy, although they should act otherwise towards you.

You preserve your conquests by ingratiating yourself with the conquer'd; and taking away their desire of revolting.

If you have to do with a confederate army, endeavour to break the confederacy, by raising discord and jealousy amongst their Generals, or the Princes in league against you.

If their army is not very much superior to yours, you must make head against them : for which end choose strong ground as near the enemy as you can, and intrench your camp well, to observe and

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prevent their designs; to attack their convoys; hinder their foragers; to endeavour to cut off their provisions with your horse: and if your enemy's country is frontier to yours, it will be easy to make diversions. If you are bounded by a neutral country, you must keep your troops together.

If the country you leave behind you has neither declared for or against you, take care to possess some pass or place to facilitate your retreat; and don't spare money for that end, if other means fail you.

A small state, that has one or two well fortified towns, may defend itself some time, till a neighbouring power, who sees with a jealous eye the increase of another, may come to its assistance.

That

That country that has a good body of troops and fortified places, may make a stand against the enemy: but their troops without places are forced to abandon all to a superior army; and places tho' strong, either without troops, or provision for them, must surrender.

If the countries that compose a great state are compact, and lie together, there is little to fear, but from civil and intestine wars.*

To maintain a long and perfect tranquillity in a kingdom, you must not perpetuate in the same person or family the government of places and provinces. And it is good from time to time to have

* An island like *Great-Britain* can never fall under a *French* yoke, unless the people themselves contribute to put on the shackles: *Quod Deus avertat!*

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some of your forces employed in your neighbours wars.

Of Movements.

The movements of an army in the field are either to march, encamp, or give battle.

Of the March of an Army.

An army should never march without guides, especially in an enemy's country. They should be brought together, to concert and agree on the places and best roads for the army's march; and you should keep them securely in case you are obliged to come to an engagement with the enemy.

An army is divided into the advanced and rear guard.

The advanced guard is composed of half the cavalry, and half
the

the foot or infantry, the pioneers, the artillery, and the general's baggage.

In the rear guard you have the rest of your horse and foot, the baggage of the army, with a regiment of horse to close the march, and keep off any small parties which might disturb your rear.

The attention of the General is to be chiefly given to the place, time, and operations of his march. That order of march is best, that requires least time and movement to put the army in order of battle.

Write down the order of your march the night before, and give the order to the major-general of the day, to be distributed by him to each regiment.

At the appointed time, let the general of the day, and the quarter-master-general, be at the place
of

of assembly or rendezvous, with the quarter-masters and camp-colour-men of each regiment, pioneers, guides, &c. in order to make the ways good, lay bridges if necessary, and mark the camp.

Let the retrenchments of your camp be levelled, in order to march in grand front. Detachments must be made for the artillery, for the General's guard, for the baggage, &c. to reconnoitre in front, rear, and flanks, to take possession of the high grounds, the better to discover the enemy's ambuscades, and to give advice of every thing accordingly.

Let no soldier stir out of his ranks, nor the regiments interfere with each other. The troops ought to march so as to keep the following regiment near the rear, in order to succour each other: so that the first regiment, when
it

it has passed a defile, must draw up in battalion, and halt till the next has passed, and joined them.

Cover one of your flanks as much as may be with a river, hollow way, mountain, or other cover, according to the situation of the country, or the disposition of the enemy, especially if you march in fair day-light.

In summer, march as early as possible, to take advantage of the coolness of the morning.

In the winter, make short marches, and take care of fires.

In the night the enemy's parties, and their strollers, advance less than in the day.

You must leave some troopers at the cross roads, lest the line should mistake its way. The advanced troops must charge briskly every thing that appears before them.

In countries more or less open, have more or fewer spies and parties abroad.

You march in battle by regiments, or brigades; the waggons in several files, if the ground will permit; and you begin your march by the flanks.

The regiments must march at convenient distance from each other, viz. about ten paces: so that if the first battalion should be repulsed, it may not put the following regiment into disorder.

In an inclosed country, you march sometimes the bodies separate from each other: and you fill and level the ditches and hedges in your way, in order to march several battalions in front.

Your front should be grenadiers, or chosen men, incapable of giving way: for it is on a good front

front you must depend, in case of an unexpected and sudden attack.

The artillery always keeps the great road, escorted with infantry, and flanked with cavalry.

You reinforce the advanced and rear guard with some foot and pieces of light artillery; and you dispose your march so, as that your great artillery, baggage, and the best part of your cavalry may be in the centre.

You send detachments of infantry to those places where you may expect ambuscades, and post them in the avenues of woods, or other suspected places, till the baggage is past; after which these detachments are to join and follow the rear guard.

In passing by a wood, you keep possession of it till the whole army is marched by.

At

At a great distance from the enemy, every regiment may march with its own baggage; and the artillery and heavy baggage may march with its escort by the most convenient road.

Near an enemy, it is best to march by night; for the enemy that would follow you by day, will be afraid of ambuscades in the dark. You post guards at those places by which the enemy may best disturb or attack you, and some small pieces of artillery with proper ammunition. Make several small detachments; and let your baggage march on that side which is best covered from the enemy: and let your artillery be ready for all events.

When you would steal a march upon your enemy, to succeed, you must consider it well, and be very secret. As soon as it is dark,
send

send away your baggage, and at midnight let your troops march : but remember to let yourattoo beat as usual. A little before morning let fires be lighted in your camp as usual, by a few men of each regiment, which are to join the army as soon afterwards as may be. The enemy will believe you still in your camp, and you will have made a tolerable advance in your march, before they will be informed of your departure.

And though it be dark when your army marches, you must forbid the lighting any fires ; but make the best of your way, choosing for the secrecy and security of your march, to go through woods, bottomis, hollow ways ; avoiding towns, villages, and all inhabited places as much as may be.

You

You order some cavalry to march before the army, to stop and secure all persons they meet, lest they should give intelligence of your march.

You should take several routs, and seem to march an indirect way to the place you aim at, in order to deceive the enemy, and make them take wrong measures.

Sometimes you make a feint as if you intended a general forage, and seem to make a disposition for it; and thus you deceive the enemy, by decamping at the same time.

You may likewise take the opportunity of decamping when the enemy is making a grand forage, or have large detachments abroad, or great escorts to their convoys, &c.

Or you may order out a great body of troops, with private orders

ders not to return to the old camp: the enemy will send out a larger body to attack it, and you will lay hold on this opportunity to decamp with less inquietude.

If you are in a town, you keep your gates shut till the moment you march, taking care that no spy slips out with the troops.

If your army is divided, and you would assemble it for some expedition, you must appoint a rendezvous to each regiment, writing down the place and hour; chusing a convenient spot for their assembling; and take care the enemy does not discover your design, and possess the place of rendezvous before you.

In short, you must judge and discern well all the difficulties which may arise in your march, of what kind soever they may be; know precisely the number

C

of

of troops which are to march; and calculate exactly the advance you may gain in your march on the enemy, before they can come up with you.

You are to observe, that if your cavalry could turn on their centre as the foot can, and did not take up more time in their facing and wheelings, you might be more expeditious.

When you pass by an enemy's garrison or post, you must leave a strong detachment before it, to keep it block'd up till your whole army is past.

When you would pass a river, and the enemy near you, plant your artillery along the banks, on each side of your intended bridge; and remember that it is most advantageous to lay your pontoons or bridge where the river gives you a reentrant angle; for there

your fire will flank the enemy both with small and great shot, while you are laying your bridge. When your bridge is finished, you pass immediately some horse, foot, and pioneers, with some pieces of cannon ; and without loss of time fortify the head of your bridge on the other side ; and if you are apprehensive of danger to your rear-guard, fortify the side by which you passed : and always when you are to keep possession of the bridge, fortify both ends of it.

If you would march by a post which is possessed by the enemy, seem to march another way, and to have a design to force some other passage. The enemy observing you, will probably neglect the post you would march by, and you turn suddenly about and

seize it, before the enemy can return to dispute it with you.

You may likewise, for the same end, lay some troops in ambush near the post, and then march another way with your army. The enemy will not fail to march to observe you, and the troops which were in ambush may seize on the post.

Observations.

When you make a quick march towards the enemy, you leave your baggage behind with a proper escort; you take your infantry *en croupe*, or mount them on horses; and you send a good body of horse before, suddenly to attack the enemy, to put them into disorder, of which you take the advantage when you come up.

If

If you perceive the enemy in disorder or confusion, attack them as soon as possible. Expedition always deprives an enemy of the opportunities of getting into order.

Quick marches give the enemy indeed time for reasoning, but none for remedying their affairs.

But when your army is marching in battalia to the enemy, it must go a certain regulated pace, and oftentimes several corps must wait a little for one another, in order to march in even front.

You send out no small scampering parties, when you march to surprize the enemy's quarters, to relieve a place, or attack the enemy ; or when you march in a close country, or thick fogg, that hinders you from being seen at a distance ; nor indeed at any time

when you march to attack the enemy.

Of Encampments.

You must send out a good detachment of horse, with your quarter-master-general and some principal officers, to reconnoitre the situation of the country and the ground you would encamp on; as well as to make ways, and lay bridges, if necessary, for as many columns as your army marches in: for which purpose he must have a sufficient number of men, with hatchets, spades, pick-axes, &c.

Endeavour to arrive in your camp as early as you can, that your soldiers may have time to get straw, and your horse forage; or to march further if it be necessary.

Before

Before you encamp, draw up your army, post your guards, detach your parties, reconnoitre the posts you would take possession of: when that is done, pitch your tents, send out for straw and forage, and take notice of the motions of the enemy. Endeavour always to encamp in a plain, which is not commanded by a high ground, nor so low as to be liable to inundations; where you may have water, wood, and forage: and take care to make such communications between regiment and regiment, and front and rear line, that the whole army may sustain one another in case of an attack.

The distance between front and rear line must be at least three hundred paces.

If there be a wood, you must either cut it down or burn it, and

leave nothing in the way but what may tend to your own security.

Retrenchments.

You must begin to make them as soon as you have sufficiently reconnoitred the ground. The more the country is covered, the more they should advance.

Far from the enemy, you canton your troops in villages. The head quarters should be as near the centre as may be. There are to be your sutlers, who do not depend on any particular regiment; and those who are appointed to receive orders.

The place of arms of all quarters, is to be in the rear of the village in the night, and in the front by day.

The infantry shut up the avenue to their quarters with barriers,

riers, wheel-carriage, chevaux de frise, or great trees.

The horse do the same ; but take care to have proper openings ready, in order to put themselves the more easily in order of battle.

You appoint them by billets their several posts, the places where they are to scout out for intelligence, and the several routs and districts your parties are to take : and if by them, or otherwise, you have reason to fear an attack, your men must lie on their arms all night.

Your artillery, with a sufficient guard, must be near the head quarters, either in or near a village well covered with waggons, chevaux de frise, trees felled, or a morass or other difficult ground before it. If these are wanting, secure it well by a good intrenchment.

For

For the security of the quarters, you must post sentinels thirty paces one before the other, at two hundred paces advanced into the country ; and let them be visited carefully by the rounds.

Send out your scouts, or spies, and parties ; and let your advanced guards defend themselves vigorously against all who attack them.

In case of an alarm, sound boots and saddles, beat to arms, and be alert : and at night visit often and carefully your out-posts, vedets, and sentinels, especially those who are near the avenues to your quarters.

If your parties or scouts discover the enemy without being discovered, they send a trooper full gallop to give notice of it to the General.

If

If they are discovered, then they are to fire some shots, to give notice to the sentinels who are posted in the avenues to the quarters; and if they are too far off, they may give notice by fires or smoak they make for that purpose.

Far from the enemy, if you find they have a design to attack your quarters, prevent and fatigue them, by giving them frequent alarms.

You may secretly post your troops in some strong ground, by which they are to pass; and they unexpectedly finding you so posted, will be disconcerted; and when they would retire, you present yourself in good order, take the advantage of their surprize, fall on and rout them.

Exacti-

Exactitude.

You cannot be too careful of the watch-word, rounds, patrols, spies, and parties; of the preservation of your ammunition; to try the waters lest they should be poisoned; and to prevent the enemy's cutting them off.

Take care there be no fortified towns, garrisons, or posts in your rear, that may endanger or disturb your convoys coming to your camp; but that the roads may be made safe and easy for the sutlers and merchants to bring necessaries thither: and if your magazines or towns from whence you draw your provisions be far from your camp, secure the roads by several good detachments posted at convenient distances for that purpose.

Gaming,

Gaming, whoring, and excessive drinking should be prevented as much as possible.

All horses, or other prize taken from the enemy, should not be suffered to be sold out of the camp.

Forage.

You must order your foragers out at different times, and to different places, that your enemy may be less prepared to disturb them. Begin by foraging in the most distant places, and end with those nearest you, especially when you expect to stay long in a camp: and send out good escorts both of horse and foot with them, to protect them, and prevent their plundering the country, which these fellows are too apt to do.

Guards,

*Guards, Alarms, and partisan
Parties.*

Your guards must mount at break of day, or close of the evening, according to the necessities of your camp, especially towards the enemy; and likewise on your artillery, bread-waggons, provosts, quarter and rear guard, general officers, and at your public market.

The alarm is given by the fire of a certain number of cannon, known to your army; or by signals of fire or smoke from the tops of the highest grounds in your front.

In the day-time you order your parties for intelligence to keep on the high grounds, in the night in the bottoms. They are likewise to scout on the great roads, and
near

near where roads meet; and, if possible, to discover without being discovered. For the security of your camp, you must have a picket guard of ten men *per* company, or more.

Observations.

If you think of staying in your camp, give a just proportion of ground to every battalion and squadron.

If your troops are canton'd or in quarters, the places should be large enough to hold them conveniently, but not too wide to be defended. Let their quarters be near each other, for their mutual defence.

Your vedets or out-sentinels of horse must not be too far from each other; and part, at least, of the grand guard, from whence they

they are detached, should always be mounted.

In a large and open country your vedets must be posted in a half-circle in the front of your quarters, and keep moving continually towards each other, and not suffer any stranger to come near them, and stop all passengers till it be known who they are.

Have always detachments of cavalry abroad, to give notice of any appearance of the enemy, to stop their incursions, take their parties, harrafs and disturb their convoys, or cut off their provisions.

If a great body of the enemy's troops appear, your advanced guards must retire to close ground, the better to sustain their attack; and immediately send notice of it to the General.

Forti-

Fortifications of a Camp.

A camp cannot be too well secured or defended: for which reason encamp as often as you can under the cannon of fortified places; or strengthen your camp so, that the troops may be safe.

A camp is fortified with good intrenchments, redoubts, small forts, tenailles, horn-works, advanced fosses, which are very useful, or other works, agreeable to the ground, the number of your troops, and importance of the post.

It should be environ'd with good deep fosses and parapets, with saliant angles at proper distances that flank each other, and may serve for a place of arms.

Let there always be a fortress near your camp if you can: take

D

pos-

possession of the rivers, high grounds, and passes which are near you. Above all things encamp near a river, for the convenience of your men and horse, and let it cover one of your flanks; and keep an open communication, for the joining your troops, and the carriage of things necessary.

Take care that the bridges you have cross this river may not be broke down by the enemy's cannon or otherwise: and prevent their being burnt by the enemy's sending down the stream fire-boats, burning-floats, &c.

Of Battles.

There are two sorts of battles, a general or particular engagement: the general battle, where the whole army is engaged; or
parti-

particular, where only a part is in action. But as they differ only in the number of troops, the methods are the same.

In the first place then, a General should be provided with every thing necessary for attack or defence. He should not only be furnished with what is requisite for one project, but have every necessary at hand for any case which may happen: for situation changes, the enemy make movements which you did not expect, and there may be many accidents which you could not prevent, and therefore you must have remedies at hand.

General Battles.

The cause of general battles is either the hopes of victory; the necessity you are under to relieve

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a place

a place besieged ; the want of provisions ; such an ardour and courage in your troops as cannot easily be restrained ; a considerable reinforcement which the enemy may soon have, and which may make them much superior to you ; some happy conjuncture which the enemy's motion may give you, as the passing of a river, or when their forces are weakened or separated.

The occasions which oblige you to avoid a battle are, first, when there is little to be got, and a great deal to be lost by it ; when you are weaker than the enemy ; when they are too strongly posted ; when your troops are separated ; when there is any misunderstanding among the superior officers ; when you perceive fear or consternation among the soldiers, or suspect their fidelity ; or in short,
if

if you think you can waste the enemy by delays.

You oblige the enemy to come to a battle, by laying siege to some important place ; by attacking them on their march ; by coming suddenly upon them ; by closing them up between two armies ; by drawing them into an ambuscade ; by making a feint as if you would retreat ; and by cutting off their provisions.

You cut off or prevent their provisions, by driving into your strong places all the cattle, forage, and grain of the country ; by burning and laying waste all the country from whence they draw their forage and subsistence ; by surprizing their convoys, burning their magazines, and taking possession of all strong posts and passes near them.

The Disposition of an Army.

You must chuse wide and open ground, if you are strong in cavalry; and close and narrow, if your strength be in your foot.

Reconnoitre well your ground, and know the space the movements you design to give your army will take up.

Each general officer should assist at the council of war, and be well informed of the General's designs, the means he intends to use, and the retreat he chuses; which should be always well secured, in case you should lose the battle.

He must make good use of his troops, according as time and place offers, and not suffer them to lie idle.

Wind,

Wind, dust, rain, the sun, foggs, are things that may be serviceable to you ; but you must not trust to them too much, they being liable to change.

Hollow ways and morasses in your front may be of great use. You send out troops advanced before them, who may hide themselves from the enemy ; and when they approach, your troops retire by passages made on purpose, you employ them elsewhere, and the enemy's troops remain useless on that side.

Post your best troops on your wings.

Cover your flanks, or at least your front wings, with an impenetrable situation, as a morass, a river, a mountain ; or fortify it with your chevaux de frise, wag-gons, great trees cut down, and the like : and if one wing has mo-

raffes or very strong ground before it, you may send the greatest part of your cavalry to the other wing.

Let your infantry and cavalry be so disposed, as to be able to support and reinforce one another, according as you have more of one than the other : and observe to mix some foot by platoons with your horse.

Appoint general officers to be on the wings, in the centre, and every where if you can, even in the rear, to animate and rally those who give way.

Be sure to have a good reserve, to return to the charge, and support the broken troops. That army who keeps most troops together at the end of a battle is always victorious. The troops of reserve are posted in the rear of the infantry in the centre: they are of use to support the troops who give way, to possess the ground

ground the others have lost, and to march to any place where the General thinks they may be wanted.

You divide your artillery, and post your cannon where you think they may do most execution; and avoid halting under the cannon of the enemy: or if you are obliged to it, it is no disgrace, but prudent, to order your men to lie on their arms, in rank and file; it may save the lives of many men, and they can get up in an instant when commanded.

You should post good marksmen, to take off the General or principal officers of the enemy. But this murdering manner is seldom followed, and should have no place in a generous war.

When you command brave and faithful soldiers, you should not let the chance of war depend
on

on a single battle. But if you suspect your troops, and you are obliged to fight, let them know they must conquer or die.

Begin by endeavouring to take some prisoners and examine them, severely, in order to get the best intelligence you can of the state and situation of the enemy ; but take but few of them, lest they encumber you in time of battle.

When it is resolved to fight the enemy, your troops should be weakest where the ground is strongest ; and strongest, especially in cavalry, where the ground is openest.*

* This was practised by the Duke of *Marlborough* at the battle of *Ramillies*, who finding his right wing had strong ground before it, drew off the *English* cavalry to reinforce his left wing, where the ground was open ; and went thither himself, knowing that he could act there with greatest advantage.

And

And therefore it is of the utmost importance for a commander to know well the ground between him and his enemy; such as morasses, rivers, rivulets, thick hedges, large ditches, &c. behind which the infantry only is of use: and to have near him those who can inform him whether they are passable for horse and foot, the better to take his advantages from them.

The General is not to act by constant rules and methods, but to vary as he sees occasion; remembering what the great *Turenne* often said, *viz. Qu'un sot l'embarassoit quelquefois plus qu'un babile homme*: That a blockhead had sometimes perplexed him more than an able General.

As soon as a General has an opportunity of giving the enemy battle to advantage, he should do
it

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it immediately if he has day-light for it. This gives spirit to his men, and fear to the enemy, and prevents their intrenching themselves.*

In good success push the advantages as far as you possibly can: in bad, find all the remedies in your power.

A General is more to be esteemed for preserving a country after the loss of a battle, than he is who gains it, and does not know how to make use of the advantages of it.

* *Donawert* was attacked the very day we marched to it. The battle of *Ramillies* began almost as soon as we had sight of the enemy. At *Oudenarde* we passed the *Scheld* and began the battle the same day: and the Duke would have done the same thing at *Malplaquet*, but that he chose to stay for the 12000 men from *Tournay*.

Actions

Actions ought more to be prized for their consequences than for themselves. In field expeditions it is impossible exactly to prescribe to an army or separate body how to govern itself in each action, because every different motion of the enemy, and the various accounts a man has of them, ought to make him alter his measures; and there is no giving a commander other than general rules, the rest depending on his own conduct and behaviour of his troops.

When a man boasts of never having committed errors in war, it is a sign he has not been long a general officer.

If your army is superior to the enemy in goodness, spirit or number, it is best to attack them in the morning: you have the whole day to drive them before you, and
2 make

make your advantage of the victory. But if there be a necessity of giving them battle in other circumstances, do it in the evening: if your army is victorious, it is well; if not, you have the night to favour your retreat.

Remember always to begin the attack, and keep your fire till the enemy have given theirs; * then march briskly up with recovered arms, and you will find they will fly before you. When you have gained the battle, keep moving after the enemy, and send a good body of light horse and hussars to continue in sight of them. This keeps up their fear, not knowing but your whole army is at hand; and thus they may abandon a

* To this method our victories, under the conduct of his Grace the Duke of *Marlborough*, were greatly owing.

whole country to you,* if no fortified town or river is in your way; and if the latter, you may drive many of the enemy into it, take their baggage, and it may be their cannon.

After the battle is gained, and the enemy fly before you, forget not to send bodies of horse immediately to summon † the towns to

* The *French*, by thus keeping up their fright after the battle of *Ramillics*, left a fertile rich country to us, with many large and populous towns, *Lovain*, *Brussels*, *Ghent*, *Bruges*, *Mechlin*, *Antwerp*, &c.

† *Dendermond* would have fallen into our hands with the other towns after this battle, if it had been immediately summoned; for the people of that place declared they expected it every moment, and had their keys ready to have opened their gates to us. This place soon after obliged us to blockade it, and at length to form the siege, and raise our batteries, &c. but it surrender'd prisoners of war, without firing a cannon, or throwing one bomb among them.

sur-

surrender which the enemy leave behind them; and leave small detachments at the roads leading to them, to prevent your stragglers from mistaking their way, and being taken by their garrisons.

When a project of importance is to be executed, chuse the commander you think best qualified for it*; and as duty is done by seniority and rotation, send those officers who are before him on other commands, to prepare the way for the officer you have your eye on. Thus will your schemes prosper, and your officers jealousy of your partiality be prevented; for it is highly necessary that all Generals and officers should gain

* This was constantly Prince *Eugene's* method.

the esteem of their inferiors.*

If it is necessary to intrench a post of great use to your army, see that it be done effectually, that your fosse be large and deep, that your works be steep and give a good flank fire, that you be well stockaded and palisaded: make advanced fosses and out-works if you have time; and in a word make it defensible against the whole force of the enemy, till your army can come to your relief; and have good communication with them by several bridges over the rivers between you. †

If

* Though Marshal *Turenne*, without any ceremony or regard to seniority, gave *Cregui* the command of a wing at the battle of *Dunkirk*. See *St. Evremont's* Eulogium on Marshal *Turenne*.

† Had this been done, *Denine* had not been brusqued and carried by *Villars* at the first assault, a vast train of artillery and an immense quantity of ammunition and provisions taken, the towns of *Dreux*

If a river is between you and the enemy, in the field, or in winter-quarters, and they have the possession of the bridges over it, send a small guard of horse every twenty-four hours to watch them, and give you intelligence if any bodies of men are coming over, that you may not be surprized.*

and *Quefnoi* lost, *Bouchain* besieged and taken, and the *French* from a defensive become an offensive army. And though the *British* troops, by order of the ill-advised Queen, fatally withdrew from their faithful allies, yet had this post of *Denine* been as well fortified, as it then would have been defended, *Villars* would never have attemptd it; or if he had, Prince *Eugene's* army might have had time enough to come to its relief. But it was our misfortune at that place, to have but one bridge of boats over the river between us and Prince *Eugene's* army, which broke during the action.

* Had this been done by *Villeroy*, *Cremona* had not been surprized, and he taken; nor would *Breglio* probably have lost his reputation.

It

It is not always necessary to fight in two lines with a corps de reserve ; for if the enemy be more numerous than you, and the ground open, so that they may out-flank you, care must be taken to extend your front (though you fight in one line) equal to the front of the enemy : but if your right and left wing be well covered with rivers, morasses, thick woods, or other strong ground, your front need only to extend to them ; the rest of your troops should be disposed so as best to support the front line, or to force the enemy where the ground is openest.

When you attack, march up to the enemy with as quick a pace as good order will allow : it gives spirit to your troops, and fear to the enemy : a slow motion allows too much time for reflection,

damps their courage, * and exposes them too much to the enemy's fire. But take care to march in even front.

When your troops are inferior in number and goodness, chuse to give your enemy battle in strong or close ground ; if you are superior, in as open ground as possible.

If you command a body of foot in a plain, and are like to be attacked by a superior number of horse, throw your foot into a square ; let your officers and sergeants be in the front ranks on each side, with their pikes and halberts ready to present to the enemy ; the soldiers with their bayonets fixed, closing their ranks

* This maxim is taken from *Folard*, and seems not a bad one : the *French* practise it, but the *Germans* and *Hollanders* march with a slow pace.

and

and files, so as to make the whole body as compact as the use of their arms will allow. Thus march, and thus receive the enemy's charge, who will soon respect and grow weary of having to do with you.*

Chevaux de frise are of great use on the above and many other

* *Charles XII*, the brave King of *Sweden*, with 8000 horse, himself at the head of them, attacked a body of between five and six thousand *Saxon* foot, commanded by General *Schulenburg* in the plains of *Poland*, drawn up in one square body. He first gave a furious charge to one front only, and was gallantly repulsed: after that the King attacked every front at once with the greatest vigour, but was again beaten off. This gave the King and his cavalry enough of it; and *Schulenburg* by the favour of the night passed a rivulet, and leaving some foot in a mill, the fire of which stopt the enemy, he made a safe retreat.

occasions. * The *Russians* never march without them; though if the foot make a close compact body, and a good front every way, they need them not; for we have often seen large bodies of cavalry pay great respect to less bodies of foot, and let them march quietly off, without risking their lives, or (which is almost as dear to them) their horses.

Have your eye on the enemy's motions in time of battle; if they draw off troops from one wing to reinforce the other, do so too; or immediately attack the weakened wing, if the ground per-

* The Duke of *Marlborough* thought his army so superior to the enemy, that he never encumber'd his soldiers with them: though it seems absolutely necessary that an army which acts on the defensive should be carefully provided with them.

mits;

mits; if not, be always strongest where the ground is openest, and intermix bodies of foot with (or have them at hand to support) your cavalry on your wings.*

There is nothing so weak as the flank or rear of cavalry: if they are thus attacked, they make no resistance; but bodies of foot can make a respectable front every way.

Cavalry should always attack sword in hand: there is little hope from those who begin with the fire of their carabines. † Therefore

* Prince *Eugene* found the comfort of his being sustained by his foot on the right wing of his army, at the battle of *Blenheim*.

† As the *French* did when we pass'd their lines in *Flanders*. *Folard* says, that in the next war he hopes to see a General who will have weight and good sense enough to throw away the carabine as a very useless instrument. It will then soon

fore their swords should have weight and length, be of the best metal, and a full yard in the blade. As this is the weapon most to be depended on, they cannot be too well chosen.

In open countries, like *Flanders*, you must have large bodies of cavalry. In woody countries, as *America*; or hilly, as *Switzerland*, *Wales*, and the Highlands of *Scotland*, cavalry is of little use.

When your wings are in the air, that is, when they have no cover, and may be attacked in flank, the usual method has been to draw your wheel-carriages, cut down trees, and plant chevaux de frise on the wings. By these you

be seen, says he, that he does his country good service, by obliging the cavalry to attack sword in hand, which is the way they always should.

make

make as good a cover as you can: but remember, where your wings are exposed, the best method is to strengthen your flanks with good bodies of foot,* which alone are capable of resisting the efforts of horse, or the torrent with which they drive your broken squadrons.

Your centre should likewise be well supported; for an army broken in the centre we may pronounce defeated, and the battle irrecoverably lost.

General officers should keep the posts assigned them, or which their rank gives them; and not leave them, to go where their curiosity or a distant fire invites them; and to have it said in print, *Such a one was every where:* when really they should remem-

* The wings being thus secured, there is little to fear, though you should be out-flank'd by the enemy's squadrons.

ber, that he that is every where is no where; and that he is the best officer, who is found where the duty of his post requires his presence.

As every thing depends upon the strength and good resistance of the front line, it should be made much stronger than the second; and therefore care should be taken to have good bodies of foot in the rear of both wings of horse, and in the rear of the centre and both wings of foot.

Horse should never be sent against an enemy, without a proportionable body of foot for their support.*

* General *Wallis* found the inconvenience of this at the late affair of *Crutzka*, where he marched against the *Turks* with the greatest part of his cavalry, and had only eighteen companies of grenadiers to sustain him. The consequence was a defeat, which was followed by an ignominious peace.

Never begin the attack with part of your army, if the rest are not at hand to sustain you.

Never give the command of a brisk and important attack to a slow officer.

When horse are sent to attack the rear of a retreating army which is near you, let them take foot behind them. They should not grumble at it, for they will find great use and comfort from them.*

Take

* For want of this, horse have, in sight of the enemy's rear, stopt short, cried out for the foot, and halted till they came up; by which time the enemy had retreated a good way: the horse again march'd after them, came up with them, stopt short, and call'd out for the foot as before; and at length, after receiving a fire from a very small body of the enemy's foot, they retired and pursued no farther: when, had they taken infantry behind them, it would probably have stopt the enemy, and brought on a general engagement:

Take care in all strong or inclosed ground to make large openings in the hedges, on the flanks of each regiment, that the battalions may have a free and easy communication with each other from right to left of your army.

Avoid encamping in swampy bottoms, or where great torrents of water from hasty rains may sweep away the baggage, forage, and tents of the army.

Be sure let your camp have the advantage of water, for the health and convenience of your men and horse: a good river in front or flank will strengthen your camp, and refresh both.

agement: which was what the Duke of *Marlbrough* intended when he detached Count *Tilly* from his camp at *Nivel*: but this method of taking foot *en croupe* was not once practised by our army during the late war in *Flanders*.

Keep

Keep your camp clean, and order the malefactors of each regiment to bury all dead horses, dogs, &c. that are found in front or rear of their regiment.*

When you are near the enemy, and resolve rather to fight than quit your camp, chuse the ground, and be ready in an instant to form in order of battle on it; and that, before the enemy can come up to you. †

Try and reconnoitre well, and as soon as possible, the rivers, ri-

* This method must not be ordered among the *Germans*; for he that does but touch one of these dead animals, or even the rope that draws it, is so contaminated in their opinion, that no officer or soldier will eat or drink with him ever after. Therefore there are persons appointed for that purpose, with whom the soldiery will have no commerce.

† The *French* neglected this material maxim at *Blenheim*.

vults,

vulets, morasses, ditches, &c. which are between you and the enemy; and prevent as much as you can their doing it.*

Always endeavour to be master of the bridges between you and the enemy, and secure each head of them, with good works well guarded; and encamp not too far from them.

† If before a battle you judge it necessary to take possession of the villages in your front, let them not be much advanced or too far from you, but rather in a line with your front. Open their flanks largely, and make good communications within, that you may sustain them, and they within, one the other.

* The *French* also neglected this before the battle of *Blenheim*.

† The neglect of this lost the battles of *Staffarda* in *Italy*, as *Fauquier* thinks.

Leave

Leave nothing for chance to do,
but what wisdom cannot effect.

Let no inferior officer officiously
attack any post or part of the ene-
my's army without orders.

If you find it difficult to dis-
lodge an enemy from an advan-
tageous post, send some troops
with trumpets and drums into the
inclosed ground on their flank or
rear: their sounding and beating
a march will often make them
believe they are to be attacked
there, as well as in front, and so
cause them to quit their post.*

If the enemy lay siege to an
important place, do not attempt
the raising it, till by the length of
the siege, fatigue, death, and de-
sertion, which is frequent on these
occasions, the enemy's army is
lessened and dispirited.

* See *Ramsay's Turenne*, Vol. I. p. 38.

And to approach their army, and be afterwards forced to retire,* would be attended with very ill consequences both to your army and town besieged.

If you resolve to besiege a place where the enemy's army may possibly cut off your provisions and communication with your magazines, take care before you open your trenches, to be well provided with all necessaries for the duration of the whole siege. †

|| When you detach from one wing to strengthen and make a

* As the *French* did both at the siege of *Lisle* and *Bouchain* last war.

† If the communication with *England* by the way of *Ostend* had not furnished to the siege of *Lisle*, we must infallibly have been obliged to raise it.

|| *Fouquiere* says, that *Luxembourg* at the battle of *Fleurus*, perceiving that the march of the cavalry of his left wing was hid from *Waller*, drew them up on the flank of the enemy's right wing, attack'd, and had an easy victory.

grand

grand effort with the other, if possible do it so as that the enemy may not perceive it, lest they attack immediately your weakened wing and defeat you.

* When any part of the first line is broken, the nearest regiment of the second should instantly march up, repulse the enemy, and make good the line; and give time to the broken regiments or squadrons to form in their room. But it too often happens, for want of courage or presence of mind, that the first overset of a part of the front line strikes a terror in the second, who instead of sustaining gallantly, look on all as lost, and fly before they have struck stroke; when, if they would but confi-

* This was gallantly done by *Medavi* against the Landgrave of *Hesse*, as *Feuquieres* says, at the battle of *Castiglione* in 1706.

F

der,

der, that if the attacks, however brisk and successful on the front line, were well supported and repulsed by troops of the second, it is odds but the enemy, seeing your bravery and resistance, and their first fire and spirit spent, will give way, get a panic, and leave the victory to you, as they did at *Ramillies*.

Consider well before you come to an engagement with the enemy, the situation and circumstances of their army; and whether you may not gain more by temporising, cutting off their provisions, or otherwise distressing them, than by giving them battle, and the chance of a victory over you.

If their means of continuing the war be scanty, and yours otherwise, it is best to dally with them, and come to nothing decisive, though your army should be
supe-

superior. Want of forage, bread, or other necessaries, will often oblige an enemy to quit their camp, when your whole force could not have done it.

* If you chuse to give the enemy battle, let the circumstances of it be such, that if you lose it, it may not be decisive on your part, but may be so to the enemy if you gain it; and never give or engage in battle, but when there is much more to be gained by victory, than lost by being beaten.

Always encamp your army, if near the enemy, in the manner you intend they shall fight.

When an enemy would attack you, and you have rivers, rivulets, or morasses, &c. before you, draw up your army so near them, as

* This was always Prince *Eugene's* maxim during his wars in *Italy*.

that if they pass, they may not have room or time to form, but be overset and driven into them as fast as they come over.*

If your right wing beat the enemy's left, so as that they break and fly before you, and seem to be quite routed, yet pursue them not too far, but with your troops in good order wheel to the left, and charge the remaining enemy in flank, whilst your left wing is busying them in front: so will you easily defeat them. †

A General should always endeavour to make his war become offensive, as ours was in *Flanders*. His troops will often be quiet in

* Had *Tallard* observed this method at *Blenheim*, he might have made a better figure in history.

† There are many instances where battles have been lost by not observing this maxim.

their camp, while the enemy are insecure and harraſſed.

A commander in chief ſhould never be prevailed on to drink to exceſs: that might give the enemy a terrible advantage over him.*

Prevent gaming among the troops as much as poſſible. Soldiers have often deſerted when they have loſt their pay, and are indebted to the company, which gaming is frequently the cauſe of.

† Take care your army never wants bread; other neceſſaries of

* The Duke of *Marlborough* and Prince *Eugene* were remarkably ſober men. See *Rantzau's* defeat from his love of wine. *Ramſay's Turenne*, Vol. II. p. 213.

† If the Emperor's army is ſupplied with bread, little other care is taken of their ſubſiſtence. Their ſoldiers ſay, that if they have their full allowance of bread, a little ſalt, and a pipe of tobacco, they *kan durch fahren*, that is, go through the world with you; and that ſiſh is not neceſſary for a ſoldier.

life will follow of course; for as all victuals in an army are paid for in ready money, butchers, bakers, wine-merchants, &c. will flock to you. But you must make your communications with your magazines as secure as possible, and have them in more places than one, that if one should be cut off, others may supply you.

It promises great advantages to his Majesty's service, that soldiers should be suffered to lift for five or seven years, as the officer and they can agree; and at the expiration of that time, they, returning the inlifting money, and clearing all debts due to the company, to be freely discharged if they desire it. This would make recruiting easy, and many of the discharged soldiers would return again to the service when wanted, or give a good opinion of a soldier's

dier's life to the young fellows in the countries they retire to. The same thing might do well in the sea-service.

It is of the greatest importance that your soldiers be instructed in the best and most adroit method of loading and firing their firelocks. Without this their manual exercise is but ornament and shew. The *French* do not cut the neck from their ball, but tie their cartridge to it as it comes from the mold: the paper being thin, when the cartridge is uncapp'd and put into the barrel, the bullet at the end of it, by a stamp of the piece, and the weight of the ball, drives down the paper, so that the firelock is charged and wadded expeditiously, and without drawing the rammer. This seems worthy of imitation.

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dier's life to the young fellows in the countries they retire to. The same thing might do well in the sea-service.

It is of the greatest importance that your soldiers be instructed in the best and most adroit method of loading and firing their firelocks. Without this their manual exercise is but ornament and shew. The *French* do not cut the neck from their ball, but tie their cartridge to it as it comes from the mold: the paper being thin, when the cartridge is uncapp'd and put into the barrel, the bullet at the end of it, by a stamp of the piece, and the weight of the ball, drives down the paper, so that the firelock is charged and wadded expeditiously, and without drawing the rammer. This seems worthy of imitation.

In order to give the soldiers a warm heart for their King and Country's service, the colonel should take care that the chaplain preach at least four times in the year to the regiment, if the companies can conveniently be assembled; and his sermons always to set forth the great blessings this nation enjoys under a Protestant King and family, the danger and cruelty of Popery and slavery, if ever the enemies to our present happy establishment should prevail; to exhort them to fight manfully in defence of their Religion and Liberty; and to pray with warm hearts for his Majesty and royal family before their sermons.

* At the same time that you are obliged to punish your soldiers

* In the *Military Maxims and Political Reflections of Santa Cruz*, c. xvi. is this

diers with severity, take care not to lose their affections.

Let none fear you but the enemy, and the evil-doers: get that respect from the rest of your troops, which is consistent with their love.

See that there be subordination in your army; for he that knows not how to obey, will not know how to command.

this note, *viz.* That *Lucius Papirius*, a Roman Dictator, seeing his troops hated him on account of his great severity, and that they hindered his gaining a victory over the *Samnites*, people of *Abrozzo* in *Italy*, thought it absolutely necessary that he should regain the affections of his army. He changed so remarkably his conduct, that he went from barrack to barrack, and visited the wounded soldiers, treating every one with so much familiarity, that he gained the love of them all; which afterwards caused the entire destruction of the *Samnite* army, who in a second battle were quite routed by the Dictator.

Care-

Carefully find out and imitate what the soldiery esteemed in your predecessor, and avoid what they disliked in him.

Let not any pique or ill-will to your superior officer divert you from doing all the real service you can to your King and Country.

Distribute your bounty yourself, and let it not appear that any other person had a hand in it: but let punishments (though you order them) seem to proceed from court-martials, or other courts of judicature.*

Regulate all your actions by a strict regard to your duty.

Instead of wishing for a war that you may make a greater fi-

* *Suares* says, that the first Grand Vizirs were made by *Amuret*, to throw the blame of all severe executions on that minister, and to reserve to himself the applause of all generous and good actions.

gure,

gure, endeavour nothing so much as the good and tranquillity of your Country.

Be more anxious to gain the love of your troops, than to heap up riches; and spare not one to gain the other.

In a word, do every thing for the good of the soldier, that is consistent with your service to your King and Country.

It is better to march up to the enemy, than to expect them; and endeavour to move up to them in good order before they are ready to receive you: charge them briskly, and let your artillery keep a continual fire on them: attack their squadrons in flank by small detached bodies; and never attack a squadron without breaking or putting it in disorder.

You must be ready at all times to succour and refresh your troops
who

who seem to be most fatigued ; and take care that those who are repulsed do not put your second line into disorder. For this end make large intervals in the second line, by doubling the files of each battalion.

You must not march too far forward, nor separate your troops in the pursuit of the enemy, unless the victory is fully declared for you ; and even then it is best to keep your troops together, and in good order, as much as possible.

In the rear of the regiments you post your surgeons, and some officers, to take care of the wounded.

Animate your soldiers with the love of their country and honour; the hopes of booty and rewards; with the justice of your cause, and the necessity of fighting.

The victory being gained, you
return

return thanks to Almighty God, and, if convenient, in the field of battle. Bury your dead, send your sick and wounded into the hospital: proclaim your victory, and pursue the enemy, in order to disperse them, hinder their joining, and prevent their rallying, or keeping the field; take and besiege their places, seize their strong posts, and every thing that may hinder your communication with the country you serve.

You divide in common what has been taken from the enemy, and the prisoners according to the tax of their ransom.*

If there be any prisoners of distinction, they are to be presented to the General, who will reward those who took them.

* There was no tax or ransom during the late war; but officers were exchanged for officers, and soldiers for soldiers.

You give to each trooper or foot-soldier one part of the booty, and two to the commanding officer of the party, over and above what he is entitled to by his rank; to the quarter-master two parts; to a cornet or ensign three parts; to a lieutenant four, and to a captain six parts; and thus of the produce of all booty taken.

If you are beaten, assemble your troops where they may be in safety; let your militia betake themselves to arms; furnish your strong places well, and the posts and passes of your frontier; break down your bridges; stop up your ways, by cutting, or laying great trees cross them; and draw up your sluices.

Put your army immediately in good order, reinforce it, and demand succour from your allies.

Retreat.

A fine retreat is look'd on by many experienced officers as the master-piece of a good General ; for which reason nothing should be neglected to make it safe and honourable.

Remember never to halt and surrender your troops to the enemy,* if there is a possibility of

* As the troops did after their defeat at *Almanza* : and as two battalions did to *Turenne* in the night at the battle of *Norlingen*, though their own army was within a hundred paces of them : and as the two battalions *du Roi* did at the battle of *Ramillies*, who instead of retreating as they safely might, threw themselves uselessly into a small wood, and staid there till our column of horse came up, and there was nothing for them to do but surrender, as they did to me, when I rode up to them to offer them quarters and protection.

retreat-

retreating or defending yourself with success.

You must give to all your troops a rendezvous remote from the field of battle.

After having computed the time necessary for your retreat, with that which the enemy will require to come up with you, gather your troops together, and your prisoners, and march to some strong ground without stopping.

If you have many prisoners, separate them in three or four bodies, and let them march between the squadrons, without arms or spurs; and mount the chief officers, or those who cannot walk, on the worst horses can be got for them.

If you are obliged to fight again, send your prisoners and booty to some strong place, with a sufficient guard; or send them
before,

before, with a party in proportion to their number, whilst you are engaged with the enemy.

Let your retreat be made by ways where you do not expect the enemy; and in your march, put good detachments in the woods, vallies, narrow passes, or other places, which may obstruct the enemy in their pursuit.

Leave three or four troopers and a trumpet, well mounted, at the entrance of a wood, close country, or road at the top of a high ground. The enemy appearing, the troopers shew themselves, sound their trumpet, and oblige the enemy to march slowly and with precaution; and then at a certain distance they gallop as fast as they can, and join your army.

If the enemy get before you, and attack your advanced guard, you must sacrifice some of your
G troops,

troops, who are to charge the enemy, whilst the rest of your army marches off with the greatest diligence.

If you can be well informed, that the enemy's advanced guard has march'd with so much haste, as not to be soon joined by the rest of their troops, halt behind some eminence, hedge, or other cover'd place, have your troops drawn up in good order, and suddenly fall on them as soon as they appear: they will be weaker than you, perhaps in disorder too, and you will easily rout them.

Do this always, when you have too little time for your retreat, and the enemy cannot come up to assist their advanced guard; and attack them always with vigour.*

* Or, as the *French* call it, *tête baissée*.

When

When you are weak, and would not risque a battle, you succeed by temporizing ; by keeping the enemy within their own country, and eating up their own forage ; and if they want the means of supporting a long war, have few or no fortified places, and the country they possess is too small to subsist their army, it is then their interest to give you battle, and it is yours to avoid it.

You likewise may get the advantage of the enemy by starving them, by burning their forage and magazines, by laying waste the country from whence they draw their subsistence, seizing their passes, breaking their bridges, and sending out great parties to surprize their foragers and convoys, and at the same time putting your army in order of battle, to pre-

vent their weakening theirs by sending parties to their relief.

Block them up in their camp by redoubts, small forts, and possessing their passes, if the situation of the country will permit you; or burn their camp by open force, or by people appointed for that purpose.

To prevent the enemy's starving you, attack their ambushes, possess as much country as you can; make your camp sure by good intrenchments and redoubts, which defend your avenues and communications; change your camp; endeavour to be near the sea, or a navigable river; in a word, be master of your rear, and have wherewith to subsist your army.

You put the country under military execution, which refuses to pay contribution; and you oblige them

them to it by burning their country, plundering, and taking some of the inhabitants prisoners for hostages.

When a country is suspected, the General must keep some of the principal inhabitants near him, under the pretence of civility.

You seem sometimes to show fear, to give a greater confidence to the enemy in their own strength, and to make them more negligent and less distrustful of you.

You make a feint retreat, in order to induce them to make some false movement, which may put them in a disadvantageous situation, and give you an easy opportunity of correcting them.

To throw a terror and consternation into the enemy's country, separate your troops into several bodies, as secretly as you can, to execute several enterprizes at the

same time. Let it be reported abroad, that your troops are more numerous than they are; and to confirm that opinion, let bodies of them appear in several places at the same time.

Particular Battles, and Ambuscades.

You lie in ambush in woods, gardens, houses, villages, ruins, ditches, hollow ways, and coppices.

Post yourself so, as that you may retire by several ways, in case the enemy should come with a superior force; and contrive it so that you may quit your ambush without disorder.

Reconnoitre well the place you would chuse for your ambush, lest you yourself fall into one.

Post

Post your sentinels so, as that they may see without being seen; and be very alert, lest you should be surprized. Make two or three ambuscades at the same time.

Put all your troops in ambush, if the enemy can come at you only with a part of their army; but if they can come towards you with the whole, then make only small ambuscades.

You let single people or small parties pass without shewing yourselves, when you expect some more considerable stroke shall offer: but if they discover you, they must be stopp'd, and taken into your ambush, till the expected affair is over.

Those who are commanded to attack an enemy in ambush, should march to them by unknown and by-ways; and the commanding officer should be the only person

who knows what he is going about.

Skirmishes.

You skirmish to reconnoitre the situation of the ground or place ; to animate your soldiers ; to try their courage, and that of the enemy ; to get prisoners, and intelligence ; to seize or secure a post ; or stop the march of an enemy.

If your army be small, you must give it more front and less depth ; and let the same troops pass several times in the fight of the enemy : widen your intervals ; let your drums beat, and your trumpets sound, out of sight of the enemy, and where you have no troops.

On the contrary, if you are strong, hide part of your troops behind

behind some cover, and let your front appear narrow, by giving depth to your regiments, or drawing one or more in the rear of the other.

In your skirmishing, you must take care not to be drawn into an ambuscade; succour your troops often; and if you think of retreating, let your skirmish grow hotter.

To surprize a Post or Quarter.

To succeed in this, you must get a perfect knowledge of the place; entertain good spies among the enemy, in order that if they should get notice of your design, they may make no movement without your knowledge; and agree on a place with them, where they may bring you their intelligence.

Have

Have three or four light carts, drawn each with one horse, to carry what is necessary for your purpose. In one you may have three or four petards; in another a little folding bridge, which may serve as a mantelet or shelter when you pass the fossé; in another two chevres, or machines to mount your guns with, some large pinchers, strong saws, hatchets, hammers, nails, bolts, files, and other instruments of force, such as cricks or jacks, handspikes, and the like. These carts may serve for cover. Add to these, two small pieces of artillery, light and short, mounted on very light carriages, and drawn by one horse each; and a small mortar, with some cohorns, bombs, and grenades.

When you would surprize the enemy by a sudden and unexpected

pected attack, seize on such passages as may secure your retreat; be at the place at the hour appointed for execution; and do not halt too near the place you design to attack, lest you should be discover'd by the foragers, scouts, or small parties of the enemy: and whilst you are in action, have a body of troops abroad, to hinder the place from being relieved.

Endeavour to attack the post in flank or rear, and come as near as you can to it without being discover'd: cut off their patrols, vedets, and advanced guards.

These sort of attacks are always best made in the night, or at the break of day, or close of the evening; before the enemy have posted their guards or sentinels, or given any order for the security of the place.

You

You must not give them time to assemble their troops, but as soon as you are discover'd, charge briskly, and enter pell-mell with the enemy. Separate your troops into several bodies, and let them all attack, at the same time, in different places.

Force your way immediately to their main guard, seize their place of arms, and push forward to hinder the enemy from deliberating, assembling, or putting themselves in order of battle.

Let your horse gallop instantly to the parade; where finding no resistance, detach small parties from them to scour the streets, and seize the commanding and other officers: and whilst this is doing, let another body of horse be ordered to march round the out-skirts of the post, to seize all who would make their escape.

In the mean while the rest of your infantry must march into the place, take post in the market-place, and draw up in order of battle, to be ready to march where there may be occasion.

Surprizes.

You fall on the enemy by surprise when they march through narrow and difficult passes, when one part has pass'd, so as not easily to come to the succour of the other; as in the passage of rivers, or woods, in which you lay an ambush of foot, posting likewise a body of horse near the place they come out at; and when part of the enemy are come out of the wood, you charge them in front, flank, and rear; and you have them at a cheap rate.

Attack

Attack of Lines or Intrenchments.

When you attack lines, always make a false attack with a small body of men, in order to favour the true ones; and let your attacks begin precisely at the same time.

Let your attacks be made in the night: the enemy, not seeing your disposition, will not know where the storm will fall, and consequently must keep every place guarded.*

Take care for the above purpose, to carry good store of fascines and hurdles with you: let your cavalry, as well as the

* See *Ramsay's Turenne*, Vol. II. p. 130. where there is a remarkable attack of lines.

infantry, be well loaded with them, in order to fill up all advanced or other fosses: and direct your men, as soon as they have entered the lines, to open the barriers, and level the line for the cavalry to enter.

Reconnoitre well the enemy's lines, that you may know their situation, and the approaches to them, before you attack.

March briskly up to them with your infantry in two lines; keep your fire, and to each battalion of the front line, appoint four or five squadrons to carry the fascines and hurdles.

Seem to resolve to attack the intrenchment in the part you least design: let fascines be cut, and other glaring preparations made; and whilst the enemy is intent on the defence of that part, you march in the night, and slip into their

their line where they least suspected you.*

It almost always happens, that an army which attacks intrenchments or troops in the field with vigour, and is well sustained, finds great advantages over those who defend.

If you apprehend the enemy will attack your lines, keep constantly out small parties, especially in the night, to give you the earliest intelligence of their motions, that you may be ready to receive them.

Artillery, and what belongs to it.

The metal of what is called brass cannon is composed of copper, tin, and brass. To one hun-

* This was practised with success by the Duke of *Marlborough*, to the great saving of the lives of men, when he pass'd the *Geet*, and the lines at *Helisheim*, and after that at *Arlioux*.

dred

dred pounds of copper, they put ten of tin, and eight of brass.* There is no such thing as green metal: that colour is only superficial, and caused by the verdegris.†
To

* But these proportions differ, inso-much that every foundery even in *France* has its own proportions, as ours has at *Woolwich*, and each founder thinks his own best. It is however certain, that the difference in the goodness and nature of the metals, must cause an alteration in their proportions.

† Cannon formerly used in France.

Names.	Pounders.	Feet long.	Weight.
Basilisk	48	10	7200
Dragon	40	16	7000
Flying Dragon	32	22	7200
Serpent	24	13	4300
Culverin	20	16	7000
Passwall	16	18	4200
L'Aspic	12	11	4250
Passondeau	8	15	3500
Pelican	6	9	2400
Sacre	5	13	2800
Sacret	4	12	2500
Faulcon	3	8	2500
Faulconet	2	10	1350
Ribodequin	1	8	750
	H		N. B.

To point your piece right, it is fit you should know, that if a cannon be fired horizontally, on a horizontal plain, one half of the range of its ball describes a right line, the other a curve or parabola. You have crooked compasses to measure the calibre of the cannon and ball.

Each piece of cannon requires three fourths of the weight of the ball for its charge, the whole weight for the proof, and one half

N. B. Many of these names were formerly given to our pieces of ordnance; but now they are only called by the weight of their ball, as a 42 pounder, 32 pounder, 24 pounder, 18 pounder, 12 pounder, 9 pounder, and 6 pounder; which are the natures of the several guns on board our line of battle ships. There are smaller for less ships, and field artillery, down to a patterero, which carries a pound ball.

For the alliage or proportions and mixture of metals for artillery, see *St. Remy*, Vol. II. p. 45—50.

for

for repeated service ; for the quantity of powder must be lessened as the metal grows warm ; and when hot, you must cool it with vinegar and water.

A cannon pointed to hit the mark will carry its ball about seven hundred yards ; the culverin about the same distance ; but the bastard less.

The ordinary force of a cannon fired at two hundred yards from the mark, drives the ball into solid earth about ten or twelve feet ; into earth less compact, fifteen or sixteen feet ; and into sand or loose earth twenty-two to twenty-four feet.

Cannon are charged with bullets, grape-shot, red-hot bullets to set fire to the objects you design to burn, with barr'd or chain bullets, and sometimes with pieces of old iron.

The powder is made in the following proportion, of salt-petre, sulphur, and charcoal.

Salt-petre	6 Pounds.
Sulphur	2
Charcoal	3

11

To give your powder the greater force, you augment the quantity, and better the quality of the salt-petre, and take more pains in pounding the ingredients well together.

The provision of powder for your cannon, mortars, &c. must be regulated according to the designs you form, or the conveniences you may have of taking it as you want it, from the fortified towns near you: for one of the most prudent precautions of a General is, never to embarrass himself

self with what is not necessary to his schemes, or for his defence.

Of what is chiefly necessary for the subsistence of an Army.

In an army you must look on four fifths only as military, either of men or horse: the rest serve for the baggage, sutlery, artillery, &c. Care must be taken chiefly that the soldier never wants his full allowance of bread; for the rest he can shift. Ammunition of all sorts must be at hand, tools, workmen, guides, and spies.

You give to each soldier two pounds of bread *per* day; to each horse ten pounds of oats, twenty-five pounds of hay, and three bundles of straw: one sutler with wheel-carriage to a regiment, three baggage-horses to each captain, and one to each subaltern. But

this may be altered according to the pleasure of the Prince or General, allowing to the general officers, and others, as is thought most convenient; remembering always, that the fewer wheel-carriages attend an army, the less it is encumber'd; and that it has too often happened, that a whole column of an army has been stopt in its march by a line of wheel-carriage. Besides, a superfluous number of baggage-horses eats up the forage from the necessary ones, and increases the scarcity of provisions in an army. In camp your provisions should be between the two lines, and near the centre, for the more commodious delivering the bread to the whole; and your grand magazine and bake-houses in towns near you, from whence you may have with the greatest ease and safety, either by
boat

boat or wheel-carriage, what the army may daily stand in need of.

Take care of roguery, corruption, and treason; but above all, that your bread-waggons, &c. be not insulted by the enemy.

You should have some understanding people, who, without doing wrong to the merchants, should tax what they bring to the army.*

Let the bread be delivered to the soldiers as regularly as possible, and according to the list of the effective in each company, signed and certified by the commanding officer of the regiment.

Ammunition.

Under the title of ammunition is comprised not only the cannon,

* The Duke of *Marlborough* never suffered the least tax to be laid on any provisions brought to his camp.

mortars, cohorns, and all that is necessary for them and the service, as bullets, cartridge, old iron, bombs, carcasses, grenades great and small; but likewise all sorts of offensive and defensive weapons, which shall be hereafter described, as firelocks, wall-pieces, fine and coarse powder, petards, quick-match, and generally every thing that may contribute to the destruction of your enemy, or your own preservation.

A hundred charges for each cannon is judged sufficient, and fifty for each soldier.

Tools.

For removing earth, to make bridges, or other necessities.

Workmen.

Such as proper persons to attend your ammunition, boatmen, carpenters

penters, smiths, millers, bakers, waggoners, gunners, matrosses, and pioneers.

Guides.

They should be faithful, and have a perfect knowledge of the country where you are, and of that you have a design to march to. They should be sufficient in number to be at the head of each column, or sent to any detached body, according as they may be wanted.

Spies.

They are attach'd to those who give them most; who pays them ill is never well served.

They should never be known to any body, nor should they know one another.

When

When they propose any thing very material, secure their persons, or have in your possession their wives and children, as hostages for their fidelity.

Never communicate any thing to them, but what is absolutely necessary they should know.

Of fortified Places.

Strong places should be chiefly on your frontier, or on considerable passes. They should be large enough to contain a garrison capable of stopping an enemy who would march into your country. The place of your residence should likewise be well fortified.

The situation and convenience of the place should also be considered, the good air and commerce of it, that you may have money,
pro-

provisions, and ammunition for the support of a good garrison.

Of Citadels.

The citadel should be built on the strongest ground and the highest, that it may overlook as much as may be every quarter of the town.

It should be contrived so, as to be easily succour'd. It should have two of its bastions within the town, and the rest without. Let it be near the place; and if the town be on a river, let the citadel command it, as likewise the place and the country about it, without being commanded itself by any eminence.

You must not make it too large, because too spacious a circumference is difficult to fortify and defend.

You build citadels in great towns, to hinder the inhabitants from revolting against the garrison, who may not be safe among a numerous and ill-disposed people, especially whilst their town is bombarding, and their houses burning about their ears.

The populace, who are easily raised into a rebellion, and little addicted to like the best rulers, want such a curb upon them.

You build the citadel out of the town, that if the enemy should seize the place, they may be beaten out again by means of it.

You always put in a citadel a governor, who is to be independent of the governor who commands in the town.

You must observe to make the fortifications of your citadel regular if you can, notwithstanding
the

the opinion of some gentlemen, who pretend that irregular places are of better defence.

Rules of good Fortification.

It is usual to make a distinction between regular and irregular places. The first are those whose situation will permit you to make every part of the work according to the rules of art, and in just geometrical proportions. The second are those, where the ground is so irregular and ill-disposed, that it prevents art from giving those geometrical proportions to the different parts of the work. The irregular which come the nearest to the regular fortifications are the best. Places commanded by high grounds are less strong than those that are not, and cannot make a long defence against an enemy
who

who knows how to make use of the advantage.

That place that has most ground inclosed with fewest bastions is the best: from whence it naturally follows, that the greatest bastions are the strongest.

In fortifications, the body of the place is to be considered, as well as the out-works. Upon which you are to observe, that a place, though strong by its out-works, is worth little, and cannot hold out a siege in form, if the body of the place is not fortified likewise, as well as the ground will allow.

Let each part of the place be sufficiently strong to resist the force of the enemy's cannon. Let there be no part of the wall but may be seen from top to bottom, from one or more places of the town: this is what we call Flanking:
ing:

ing: and let it not be out of musket-shot; for in case of an attack, it is of great advantage to the sustainers, to keep as good a fire on it as possible.

Let your ramparts be so wide as to afford you a good parapet cannon-proof, a good banquet, and room enough for your artillery.

The Body of the place, and Bastions.

Let your bastion be contrived as wide as possible. I have already said, that the largest are the best, because they give you greater room to retrench yourselves, and more fire for your defence. Two hundred men may be sufficient for each bastion.

Let the gorge have at least seventy yards, the wider the better. Let the flanks be long, at least
thirty

thirty or five and thirty yards. Let the flank'd angle be strait, of ninety degrees, and never less than sixty. Let the flanking angles be as close as may be; the least to be of a hundred and fifty degrees.

Curtains.

The curtain is the space between the two bastions, or that which joins them. They serve to cover the houses and inside of the place. To be good, they should be in a strait line: the others are defective, in that they hinder the flanks from seeing and defending each other.

The curtains then ought to be defended with two flanks; but if necessity will let you have but one, you must plant palisades before them, and an advanced fosse. Let your line of defence go from
the

the flanking angle, or from some part of the curtain, to the point of the opposite bastion; and let it not exceed 240 yards, which is the ordinary range of a firelock.

There are simple and prolong'd curtains: the last are best, because they lessen the number of bastions, and enlarge the place; supposing nevertheless, that they are short enough for the defence of the place, and according to the rules of good fortification.

The simple curtain has generally 140 or 160 yards in length. It should never exceed 170, nor be less than 80 yards, to be within the rule of defence.

The prolong'd curtain should never be more than 260 or 270 yards in length.

Gates.

They are generally in the middle of the curtain, from whence they are seen and defended by the two flanks of the bastions. They should be covered with a good ravelin, that they may not be seen or amphiliaded by the enemy.

The palisades and barriers before the gates within the town are often of great use. The fewer ports you have to the fortress, the more you are secured against the enemy.

Fossés.

Let your fossé or ditch be at least 40 yards wide, and as deep as possible. The deep fossés, moderately wide, are much to be preferred

preferred to those which are wide and shallow ; because they are not so liable to be fill'd up with the ruins of your breach, nor do they give the enemy so easy an es- calade or mounting ; and the foot of the wall is not so easily disco- vered, which obliges the enemy to raise their batteries higher.

For citadels and forts the fossé should be very deep, and may be narrower; and if there be water in them, they will the better prevent your being surprized.

But in great towns the dry fossé is best. You more easily defend yourself by making intrenchments, casemates, coffers, and mines; and you may dispute it inch by inch: your fallies may be made, and your succours come to you more easily.

Though the wet fosses prevent
escalading and surprize, and if
I 2 they

they should be fill'd up, it is only in one part, against which you provide a proper defence; yet they have very great inconveniences: they are unwholsome; they are frozen in winter, and put you in danger; they make your sallies difficult, as well as your succours, and your retreat dangerous; you cannot make new defences when the enemy is master of your counterescarp. In a word, the fossés full of water are less advantageous than the dry: but without dispute the best are those where you have sluices, and can keep them wet or dry at your pleasure.

The little fossés or cuvets, which you make in the middle of the large one, should be twelve or fifteen feet deep, and as many broad.

The Scarp.

This is the slope of the lower part of the wall. It should be as salient as may be at bottom, without taking too much from the breadth of the fossé. This renders the escalading more difficult; and the wall on battering will not so easily fall down, as one more erect.

The Out-works.

All parts of the fortification detached from the body of the place, and that serve for its defence, are called out-works; such as horn-works, crown-works, counter-guards, ravelins, half-moons, &c.

The out-works and approaches to the town should be commanded

by the place itself, as well as by the works near it.

Half-moons.

We properly call those parts half-moons, which are placed before flanked angles, because they have a reentrant angle, either in right or crooked lines, in the form of a crescent. Those which are before a gate or curtain are called ravelins, and have only two faces.

All these, and those we have spoken of, should be surrounded with a good ditch, half the breadth of the fossé of the place.

You have your communication to these pieces of fortification by little wooden bridges, easily broken down when the enemy becomes master of them ; or, if the fossé be dry, by little blind gates.

Counter-

Counterescarp.

The counterescarp is opposite the scarp or wall of the place. It is the wall on the other side of the fossé next the country.

All counterescarps that are not wall'd should be as steep as may be, to hinder the descent into the fossé; and yet it must be so contrived as to admit of succours, and afford a safe retreat to the town.

For sallies or sorties you have places to mount at, opposite the bastions or middle of the curtains. The slopes should be such that the cavalry may ride up and down easily.

The counterescarp should run parallel to the faces of the bastions, and make an angle before the middle of the curtain. It may

bend opposite the flanked angles, as well to make a place of arms in the cover'd way, as to save expence, and give a flant or bricole to the cannon-ball.

The Cover'd Way.

The cover'd way with its parapet and glacis or slope, palisades and banquet, is the defence against the country, to hinder the enemy from approaching your fossé. The parapet should be so high as to cover your cavalry and wall of the works. It should have a salient angle before the middle of the curtain, the bastions, ravelins, half-moons, &c. that the enemy may have your flank fire.

The length of the glacis or slope to the country has no determined measure. It should lose its slope insensibly.

You

You make epaulements or traverses of earth, at certain distances, from the parapet to the fossé, in several places of the cover'd way.

You likewise make places for the horse and foot to sally out at; but the entrances to them must be kept secure by good barriers ranging even with the palisades, which inclose the whole cover'd way.

Small Forts.

These are generally made suddenly in time of war, in the circumvallation, or other places; to stop a passage, or an army; to blockade a town. They are commonly made of earth. Their parapets, ramparts, and ditches, should be such as are before half-moons, ravelins, or other detach'd works.

works. As to the figure of them, that depends on the form of the place, or the occasion you have for them. The flanks from 16 to 20 yards; the line of defence from 120 to 160 or 180 yards.

Of the Guard of Places.

Some advise, for the defence of a place, to have as many men in garrison as there are geometrical paces round it; that is to say, for every five feet a man. Others appoint 200 men for every bastion; which is the most followed, and comes to pretty near the same thing.

That number may suffice for the ordinary duty of a garrison; but there must be more to sustain a siege: and the more you have, the better will be your defence,
pro-

provided you have provisions enough for them.

It is the duty of a good governor to use his best care for the preservation of the soldiers; and to that end, to see that they have good provisions in abundance and cheap; that they be lodged well, have good beds, firing, and kettles; and that they be not fatigued uselessly.

Compute the number of men for the guard of one twenty-four hours; then triple the number, that your soldiers may have two days rest, and no more.

You regulate your number for each day's mounting in proportion to the importance of each post; and according to the number of sentinels you will want. These last should be relieved every two hours, and in case of very cold weather, every hour.

Two

Two things extremely important require the attention of the governor of a place in time of war: first, the good condition and the abundance of his magazines, and of all things which may serve directly or indirectly for his defence: secondly, the good order among his soldiers, and the regulations as well for the inhabitants as the garrison. If either of these is neglected, he cannot make a long defence in case he is besieged; the least fault in these respects being of the utmost ill consequence, as experience has often shewn.

Magazines.

They should be furnished for a whole year. You should visit them once every month, and oftener in time of a siege; you fill

fill up what is wanting, or what is damaged, and you preserve them with care. To this end you place sentinels over them without fire-arms, who suffer none to come near them, for fear of roguery or accidents. Your ammunition and victuals should be lodged there in plenty, proportionable to your occasions.

Ammunition, Powder, &c.

You must have a coarse powder for your cannon, mortars, bombs, grenades, mines, and other such purposes; and fine for your musketry.

You furnish yourself with powder for your cannon, mortars, and cohorns, at the rate of ten shots *per* day for each piece, for a hundred days, or three months. For your musket-powder you reckon

half a pound *per* day to each man for the same time, with ball in proportion.

You should likewise have salt-petre, sulphur, and charcoal in store, to make powder if it is wanted.

Arms.

You must have small and great cannon, but most small, because they are more easily removed from place to place than the great ; copper, brass, and tin, to cast new cannon with ; mortars, hobits, cohorns, bombs, grenades, and hand-grenades, espingardes, wall-pieces, firelocks ; ball, lead, and bullet-molds to make more ; spare-arms, musquetons, and compleat suits of armour ; rondash or bucklers proof against small shot ;
pistols,

pistols, swords, bayonets, halberts, scythes set in handles, and others.

And likewise, to charge your cannon with, old nails, bolts, and pieces of iron-chains, old iron, and chain-bullets, as well as double-headed and grape-shot, spare carriages for guns, and beds for mortars, to remount immediately those which are dismounted.

Artifice.

Pieces of rope well pitched, and twisted into rings, to set on fire to give light; burning and bursting barrels, rolling fires, fire-darts and lances, fire-pots, and red-hot bullets, &c.

Tools and Utensils.

Hatchets, hand-bills, hods for carrying brick, mortar, &c. baskets,

kets, shovels, pick-axes, hoes, saws, pinchers, hammers, wheelbarrows, hand-barrows, little carts, masses to beat or ram the earth, hand-spikes, great steel nails to nail the enemy's cannon, chevres or crabs, cranes, moutons, pumps, chaplets, instruments to cut stone or wood, anvils, hand-mills, and campaign ovens for your bread.

Materials.

Stone, lime, sand, brick to repair the breaches, unwrought iron, beams of timber, planks and rafters, gabions, small baskets, sandbags, and wool-sacks, mantelets to cover your men, and chevalets, chevaux de frise, nails small and great, all sorts of timber, and parts of carriages, dung and fresh hides, to preserve you from the effects

effects of the enemy's bombs and their fire, and splinters.

Workmen.

Cannoniers, bombardiers, matrosses, artificers, miners, founders, carpenters, joiners, cartwrights, masons, blacksmiths, and others, bakers, shoemakers, good engineers, surgeons and apothecaries; with all sorts of druggs and medicines, as well for sick as wounded.

Provisions.

Good spring, pump, or cistern water; because other water, whose source is at a distance from you, may be cut off: wheat, meal, rice, oats, beans, peas, barley, rye, hay, straw, fresh garden-stuff, wine, beer, brandy, vinegar, oil,
K salt,

salt, spice, tallow, beeves alive and salted, sheep, hogs, fowls, dried fish, salt butter, cheese, and good store of firing.

The Service and Regulations of a Town, and the Guards.

You secure your corps de garde by a good palisade all round it. You double your guard in the time of fairs, markets, processions, executions, or whenever there is an extraordinary concourse of people in the place or near it.

Out of the town, you post sentinels and small guards in the avenues, and you change them after the gates are shut, that none may give notice of his post; and you give them a different parole from that of the town.

You should always have a picket of horse ready to mount and take arms,

arms, and to assemble immediately on the usual parade, and draw themselves up in good order: and the foot should have their posts mark'd out to them, that they may march thither at the first firing of a gun, beat of drum, sound of bell, or other signal, in case of an alarm.

You should have three or four pieces of cannon to each bastion, or more as occasion requires; some at each gate, and place of arms; at the governor's, at the entrance of rivers or canals, and at all places where the garrison is weakest.

You post the inhabitants fit to bear arms, if they are faithful, in the places least exposed to danger, and where there is least honour to be gained: and if they are suspected, disarm them.

The Town's people.

You forbid them to have any commerce or intelligence with the enemy ; to receive any person into their houses without declaring them ; to assemble without the governor's permission ; to go in the night without candles or lights ; and to be seen above three together.

In case of an alarm, they are immediately to retire into their houses ; and, if it be night, to illuminate their windows, that the garrison may the better see their way.

You let them all know, that if they meditate a revolt, you'll set fire to the four corners of the town, and cut off every man of them.

It

It is good in a fortified town to gain the affections of some of the burghers, who may let you know from time to time what passes, may give you light into the dispositions of the people, and inform you of those who are not to be trusted.

Make them your creditors for large sums; gain them by kindness, and keep them obedient by your authority, and turn out all that refuse to take the oaths of fidelity to his Majesty.

Of the Attack of a Place.

You attack or take a place by assault, surprize, blockade, or a siege in form.

When you assault, you attack the place vigorously on every side, and employ every thing you can think of to become master of it.

Chuse the time when the garrison is weakest, or when they are terrified, or are in disorder among themselves, or when you have any other intelligence among them to encourage you.

To execute a surprize or assault, chuse your most resolute troops, and those of best capacity; have more than enough of them, and let each of them know what he is to do, to avoid confusion.

Have a perfect knowledge of the place and ways to it; furnish yourself with all necessary implements and machines for the business; have more than enough of each sort: either march your troops in separate bodies, or all together, as you see occasion.

Be well informed of the time it will take to march to it; and set out exactly at the appointed minute.

minute. Write down the orders you would have observed, and the names of those you appoint for the action.

When you are master of the place attack'd, cut off immediately the place of arms from the streets, make several coupures in them; disarm the garrison and inhabitants, and give some of the best houses to be plunder'd by the most deserving, and the rest to be divided by lots among those who have assisted in the service.

If it be in fair day-light, you must escalate it in several places at the same time, make sham attacks; keep a continual fire on the flanks and other defences of the place: let your ladders be of a right length, strong, and light of carriage.

If it be in the night, raise them without noise; and let them be

so contrived, that you can take them to pieces; and let them have at top pullies well greased and furnished with old hat, to erect them against the wall without noise. Those which one man only can mount are strongest and most secure.

These sort of rough and bold expeditions require diligence, intrepidity, a cool head, and great presence of mind. The General must judge whether those he employs in the affair have these qualities.

It seldom happens that you succeed without the assistance of petards, which we have not yet spoken of.

The petard is a sort of brass pot very thick in the metal: they are longer, shorter, or wider: they are generally six inches thick at the mouth, and ten at the bottom,

tom, and about ten inches wide. Their weight is about sixty pounds. They have a touch-hole, and you load them with good powder. Your petard is strongly fixed to a piece of oak-plank two feet broad, two and a half long, and three inches thick or more. This plank is fix'd to a gate, draw-bridge, or the like, to burst them open. They are likewise used to open palisades, or throw down a wall that is sapp'd.

Add to this, all that has been said before in the surprizing a quarter. It is the same manner of acting: there is no difference, but in the weaker or stronger resistance of the enemy, or number of the garrison.

Surprize.

You surprize a place by the drains, casemates, or the issues of
2 rivers

rivers or canals ; by encumbering the bridge or gate by waggons meeting and stopping each other ; by sending soldiers into the place under the pretence of being deserters, who in entering surprize the guard, being sustain'd by troops in ambush near the place, to whom they give entrance and seize it.

You surprize it likewise by sending in soldiers dress'd like the peasants of the country, or in the dress of women, merchants, or priests: for which reason you should always have at your gate some honest fellows that you can confide in, and who are of the country, to observe whether those who enter are of the neighbourhood, and are not to be feared or suspected.

It sometimes happens too, that the enemy send in their soldiers as if

if they were yours, coming from the hospitals, &c.

The enemy finding you have parties abroad, dress their soldiers like yours, and presenting themselves at your gate as such, are soon let in, seize immediately the guard, and become masters of the place.

You may likewise set fire to the out-houses, and whilst the garrison comes out to extinguish it, your troops, who lay in ambush, march in, and surprize the place.

You wheedle out some of the officers under different pretences, and you contrive it so, as to seize the gate in going in with them.

You counterfeit an order from the General for marching out the greatest part of the garrison, and so introduce your own.

After an indecise battle, you frighten the place and the commandant, by shewing colours, standards, kettle-drums, and prisoners, supposed to be taken from the enemy. You command the governor to surrender, telling him there is no farther succour to be expected. The garrison and inhabitants being thus frighten'd, will surrender on advantageous capitulations in appearance.

You may likewise give a great alarm on one side of the town, whilst you enter secretly at the other which is neglected.

You have secret intelligence in the place, with some of the inhabitants, officers, or soldiers, gained with money or fair promises: but you must take care that you are not deceived, and drawn into some scrape, by their seeming to accept your proposals;
so

so that you should always have some hostage or security for his or their fidelity.

Blockade.

The places where the inhabitants are most numerous, are with greatest ease taken by blockade, because their provisions are soonest consumed.

The time that a town is most bare of provisions is before the harvest.

You likewise chuse to block it when there is the greatest resort of people, as in full market, fair, or festival. You must make yourself master of all the avenues by which convoys or relief can come to it, and fortify them; possess all the villages and hamlets round it, in order that none may go in or out of the place; or make a
line

line of circumvallation round it, with little forts at proper distances; and keep them in by raising good lodgments before their gates; burn their mills, and destroy their bridges, by the force of your cannon.

If a river runs through it, you must turn the course of it above the town, or stop it below, that by its swelling it may drown the place. Build forts along the river to hinder their receiving any thing by water, and lay bridges over it, to keep an open communication with your quarters.

You lay in the river above your bridge, long beams fastened with strong chains, to stop the force of any thing sent down by the current of the water to break your bridge, as boats laden with stones, or fire-ships, or great pieces of timber; or else you contrive your
bridge

bridge so as to open in the middle to let them pass, and avoid their mischief.

Of Sieges.

You must use all the diligence and address you can, to lay siege suddenly to a place, in seeming to intend the siege of another.

Have an exact plan of the place ; provide all things necessary for the duration of the siege ; endeavour to keep some intelligence in the town, either with the inhabitants, or by sliding some of your spies into it, who may easily give you notice of the enemy's motions, their resolutions, or the state of the garrison and ammunition during the siege, and in a word, of all that comes to their knowledge.

Block

Block up the place with your cavalry, who in skirmishing may the better reconnoitre; and will on the other hand hinder the neighbouring people from carrying their effects into the town, and prevent succours.

You must be stronger in the field than the enemy, or have two armies, one to face them, whilst the other carries on the siege. When the enemy is too strong, gain what time you can to fortify your camp before they come up to you.

If they come, receive them with firmity in your trenches, or march out to meet them, or do both if you have strength sufficient; or else decamp in time, for fear you should yourself be besieged in your camp.

Inclose

Inclose in your camp the high grounds, lest the enemy should make use of them against you.

Establish as many good posts as you can, to favour your attack and retreat.

Make good lines of communication and circumvallation.

Trenches.

In making your trenches, you always throw the earth between you and the enemy. You begin by opening them out of musket-shot, and you immediately erect a battery and redoubts to sustain your workmen.

Take care your trenches and approaches are not amphiliaded. If any are, you must make a bank on each side, and cover them with planks; and on these planks lay gabions or baskets fill'd with
L earth;

earth; or instead of these planks, lay long fascines, which they call saufages; and lay them two deep on hurdles. These fascines and hurdles prevent the enemy's seeing you, who without them would have a full view of all your motions. They likewise cover you against their small shot, but not against their cannon.

Your lines of approach should be flank'd by small forts and redoubts, in which you place guards to hinder the enemy's sallies. You work on these, and your trenches, generally in the night. You take the advantage of deep ditches, or hollow ways, which lead you either in a direct line, or obliquely, towards the place.

Batteries.

You raise your batteries as soon as possible to ruin the defences of
the

the place. You advance them in proportion as you advance your trenches. There are two sorts; those which are sunk, or planted on the even ground; and others which are raised above it, in proportion to the place you would batter. Sometimes you are obliged to make cavaliers or high heaps of earth, or platforms, to raise your batteries as high as the ramparts of the place.

As soon as you have fired your cannon, you close your embrasures, or openings in the parapet, with good madriers, or thick planks, musket-proof, to preserve your gunners.

Your batteries must be covered by a good thick parapet of earth, and fascines staked close down, or with gabions or baskets fill'd with earth; or with wool-packs, if no earth or fascines can be had.

You make use of 24 pounders to batter in breach, when you are near enough for it. Bombs are of great use to destroy the defences, magazines, and houses of the place besieged. You likewise use red-hot bullets to set the town on fire. Your bomb batteries are made the same way: they are generally sunk, and the earth makes the parapet. They differ, in that these have no embrasures or openings, as the guns must have.

Approaches.

This is the most difficult part of the siege: it is now, strictly speaking, that it begins to be dangerous, and lives are lost. The ground is disputed inch by inch; it is neither gained nor kept without the loss of men: for which reason it is of the utmost importance

tance to make your approaches with great caution, and to secure them as much as possible, that you may not throw away the lives of your soldiers. The besieged neglect nothing to hinder the approaches; the besiegers do every thing to carry them on, and to make them well: and on this depends the taking or defence of the place.

The trenches being carried to their glacis, you attack and make yourself master of their cover'd way, make a lodgment on the counterescarp, and a breach by the sap, or by mines with several chambers, which blow up their intrenchments and fougades or small mines, if they have any.

You cover yourselves with barrels, sacks, fascines, or gabions; and if these are wanting, you sink a trench.

You open the counterescarp by sapps to make yourself master of it ; but before you open it, you must mine the flanks that defend it. The best attack of the place is the face of the bastion, when by its regularity it permits a regular approach, and attacks according to art : but if the place be irregular, then you must not observe regular approaches, but must proceed according to the irregularity of it ; observing to humour the ground, which permits you to attack it in such a manner at one place, as would be useless or dangerous in another. So that the engineer who directs the attack, ought very exactly to know the part he would attack, all its proportions, its force, and solidity, in the most geometrical manner possible : and a General should never trust the attack in the hands of an
engineer,

engineer, of whose capacity and experience he is not fully satisfied: for on this depend the lives of his men, who are lost oftener by the bad direction of an attack, than by the fire of the enemy.

Passage of the Fossé.

If it be a dry ditch, you pass it by means of a gallery, or you make a traverse.

If it has water, it may be easy to draw it off by cuts from it into the lower grounds. If the place be lower than the country, you sink wells near the ditch, and draw off the water by continual pumping: and if a spring supplies the fossé, you stop it up.

If a river enters into the fossé, you turn it, by making another bed for it. If you would pass it without drawing off the water,

make a traverse, in which are several openings to let the water run. You may likewise lay floating bridges.

When you would make a gallery, you throw the earth on the side of the opposite bastion, to shelter it from the fire of the enemy. You lay at top of it fods, or fresh cow or horse hides, to prevent the enemy's setting fire to it: and the ridge of it is cover'd with good thick planks musket-proof, with holes at the top to give light.

Mines.

A mine is a subterraneous passage, which is conducted under a bastion, or the rampart of a work you would blow up by means of the powder lodged in it.

Two ounces of powder will blow up two cubic feet of earth; and by consequence two hundred ounces, which make twelve pounds and a half, will raise two hundred feet of earth, which is near two yards cube.

The miner must observe, that his powder exerts its force against the weakest part; and therefore there should be no hollows near the chamber of his mine, but at least one and a half of solidity more than is above his mine, which he would blow up.

Powder has the same force on walls or masonry, as it has on earth; that is to say, it raises with equal quantities, the same measure of wall or earth.

The art of mining requires the perfect knowledge of an engineer and fortification; to know well height, depth, breadth, thickness,
and

and slopes, by a plumb-line; what is parallel to the horizon, and what is not. He ought besides to take the levels exactly of all earths, and to have the most perfect knowledge of all sorts of rocks, earths, sands; and to know the force of all sorts of powder.

Breaches.

The cannon or mines having made a breach, you order it to be reconnoitred by persons in armour, or with large bucklers musket-proof.

The breach being well observ'd, and all things ready, you give the assault at the signal of a certain number of cannon.

You should make your attack with your best troops, and greatest vigour: reinforce often the attackers,

tackers, and return often to the charge.

You attack at the same time at other places, to give a diversion to the enemy, and lessen their resistance at the real attack; and if you cannot enter the place, you at least make a lodgment on the breach.

The place being taken, you immediately fill up all your approaches; you repair the breaches, and whatever of the works you destroy'd: you add likewise new works to the defective parts; you turn out all suspected persons; and if you would keep the place, you fill your magazines; or otherwise demolish it.

The artillery and stores belong to the Prince, the plunder * to the

* In the towns taken by the Duke of *Marlborough* last war, there was no plundering suffer'd, save in the citadel of *Liege* taken by assault, and in the Electorate of *Bavaria*.

soldiers, if a capitulation does not forbid it.

Of the Defence of a Place.

A town should be consider'd either as threatened or actually besieged. For what is to be done in either case, observe the following rules.

Before the Siege.

A place, though fortified, if it has not good out-works, a strong garrison, and good store of ammunition and provision, will make but a poor defence: therefore a governor should visit his out-works, put them in good condition, repair what is amiss, or give a new form to them, either by covering them by a good palisade, or otherwise, to retard the approach

proach of the enemy. He should visit his magazines, reinforce his garrison, double his guards and his diligence; lay in good store of provisions, and order every inhabitant to provide sufficiently for his family; visit them, and the cloisters, to know if they are stored; send out the useless mouths, and suffer them not to return; beat about the country with small parties, to hinder deserters and spies; post advanced guards in the avenues to the place, and the villages near it.

You have reason to suspect those who now and then are absent. If you have any jealousy of the fidelity of the inhabitants, disarm them, and forbid their assembling on very severe penalties.

Sometimes alarm the garrison, but do it seldom. It serves to prove their vigilance, if they are alert,

alert, and go readily to their respective posts.

Renew your discipline, and let it be observed rigorously : forbid, under severe punishments, either officer or soldier to be absent from their guard : and let the duty be done with great exactitude, and examine with circumspection all who come in.

Plant guards near all churches, or open places, where the people usually assemble : lay chains across the streets, strengthen your gates with good palisades, and plant some cannon before them ; and let your rounds and patrols in the night be more frequent.

Let all public rejoicings, processions, and fairs, be kept out of the town. The gates should be shut, and the guards doubled at these times.

Forbid

Forbid the firing of muskets, especially at night; and let no lights be made on any steeple or high part of the town, no sky-rockets be play'd off, or flambeaux burn, that may be signals to the enemy: and when these things happen, the governor should change the word, the sentinels, and the guard; put his garrison under arms; and when he has found the person who has been guilty, he is to order him a severe punishment.

As there is no place impregnable, or that baffles the industry of man; and as they have found out the secret of becoming masters of all fortified towns, though seemingly surrounded with invincible works, yet do not neglect to defend them well.

All the weak places in the works should be strengthened. If

there be no ravelins before your gates, and you have time for it, you should immediately throw them up, and put in each a guard of men: and if your time fails you, supply their place the best you can; and take care your gates be not amphiliaded.

Increase the number of passages and bridges at each entry to the town; and let your gates have port-holes, by which you may kill those who would apply petards to them; and when they are shut, lay against them great chests full of earth mounted on wheels.

If your gates are flanked, have on your bastions pierriers, or mortars to throw stones with, and cannon loaded with grape-shot, or pieces of old iron. Let your gates be well palisaded, have good barriers, chevaux de frise, locks and bolts, strong draw-bridges, well suspended

suspended and poised, chains, herſes, orgues, and port-cullis. Each of theſe are of great uſe, and may prevent a ſurprize.

Lay on the parapet of your ramparts, great beams, ſtones, and fire-machines, to crush or burn all who may ſlip into your foſſé.

Fill your ditches with water, if they were dry, and make them as deep as you can; and if your counterſcarp be of earth, make it as perpendicular as poſſible, that they may not make a deſcent into your foſſé without ladders.

If you can dig in your foſſé, make your ditch at leaſt eight or ten feet deep from the wall, and ſo far from it or any part of your works, that they may not plant ladders againſt it.

Have fauſſe-brayes or intrenchments before your curtains well guarded, good palifades behind
M your

your parapet of the cover'd way, and likewise some to range all along your fossé, to prevent their escalading. Be careful in the winter not only to break, but to remove the ice of your ditch.

Let each of your flanks be furnished with two pieces of cannon loaded with pieces of old iron or grape-shot. They are of great use either by night or day. One is to be pointed towards the face of the opposite bastion, the other along the curtain, in order to fire them on the least noise, to break the enemy's ladders, and scour the fossé.

Halberts, partisans, scythes set on long staffs, or reverse scythes, are of great use to cut off the enemy as they mount, overset their ladders, and tumble them into the fossé, where it is easy to fire upon them.

Repair

Repair all breaches, ruins, or ouvertures in your works carefully. If the time fails you for a perfect reparation, you must then plant strong palisades in them, make a good stockade in the fossé; and if it be dry, advance before it a good guard.

Let the houses be separate from the ramparts. If any are contiguous to, or join them, pull them down immediately.

If your place is situated on a river, you must plant there estacades, and ranges of palisades, keeping a passage for the boats, which you shut up with a great chain: and if it be a very large and deep river, you keep a strong guard in a boat or bark in the middle of it; or in a ship, if it be a seaport.

It is difficult to mark all the measures and precautions a gover-

nor should take for the security of the place; there are so many of them which depend on the strength of the enemy, the religion of the people within, and their affection for you, the riches and commodities of the country, the season of the year, the genius of those who attack, as well as of those you have for your defence; in short, the extent of the place you are to preserve, and a thousand other circumstances.

A prudent and exact General thinks of every thing, provides for all cases and accidents, as well those which happen to him, as those which do not. Nothing escapes his penetration, and the most sudden accidents never take him unprovided. To all the foregoing detail we can only add the following precautions: namely,

Suffer

Suffer no suspected person to continue in the place. Punish such of the enemy's spies as you take most rigorously, to frighten others from coming to observe you, or those within to quit you.

Never trust the guard of an important post to those you have the least reason to suspect. Look well into them, and oblige them under one pretence or other to leave the place.

Always let your guards be drawn by lot, that none may know beforehand where he is to mount: and never suffer them to change after they have drawn.

If you have prisoners, separate them: shut them up close, and give the keys to those you can trust.

Spare neither promises, pardon, nor recompence to deserters, tho'

accomplices in treason, if they will discover it.

Never slight the intelligence given you. Some things may seem very improbable, which however may happen: therefore you should watch the event, and examine carefully whether the advice be good or bad.

If you have a citadel, we have already said, the governor should be independent of him who commands in the town; and that the government of a fortress should never be continued in the same family. The time of a siege is the time of applying these sage maxims. You should never trust your places but to those whose conduct of life gives you the greatest confidence, and who are known neither to be too ambitious, nor avaritious.

During

During the Siege.

As soon as you are assured the enemy will besiege you, set fire to every thing round about you, that you cannot bring in. Make the avenues to the place as difficult as you can : break down the bridges ; burn the mills ; cut your dikes, open your sluices, drown the country if you can ; drive in the cattle, and bring in the grain, forage, hay, and the other fruits of the earth : in a word, lay waste the country round about you as far as you can. All that distresses the enemy, turns to your advantage.

The siege begun, oblige the officers and soldiers of your garrison to sign a declaration, by which they promise to live and die together, and that the first who

speaks of a surrender shall suffer death.

Make them believe that succours are coming to you: for which end produce sham letters and messengers.

Although the enemy intend but one or two attacks, they open their trenches in different places. You will easily know the true attacks by the number of workmen, the diligence of the work, and the strength of their forts and posts. Neglect not however the others; and be jealous that the enemy may make a seemingly strong attack at one place, and draw you into a snare by going to another.

This is the time to fatigue the enemy by false alarms, and by frequent sallies; in which you level their trenches, nail their cannon, either with steel nails, or driving

driving little hard pebbles into their touch-holes that will fit them; or bring them into the place.

You must make a continual fire on the workmen; and under the favour of this fire make sudden and unexpected sallies, and throw up new works against the enemy, to dispute the ground, and make them buy the place as dear as you can.

Have in the enemy's camp some spies, who may give you secret and early intelligence of all their motions, by throwing at night into the ditch, or other place appointed, letters tied to stones: and when you find them faithful and exact, reward them generously; this is the true key to open them, so as to give you the best intelligence.

Sorties

Sorties or Sallies.

Where the garrison is weak, forties should be but seldom : they fatigue the enemy, obstruct their work, baffle their soldiers and workmen, serve to nail their cannon, and make prisoners, who may give you notice of what is intended against you : they give an opportunity for your spies to go out, and to introduce succours. Prudence must direct you when they are necessary ; but they must always be bold, secret, and at different times, as likewise well concerted, not only for the attack, but for the retreat.

You give a signal to the troops which sally, without which you do not receive them into the town again ; and then you reconnoitre them well before you admit them ;
and

and if it be night, they should have a word: and indeed it is right to give them the word by day as well as night, without which they are not to enter.

You take care that no spy slides in with them. You furnish your works well with musketry, and point your cannon from the places to which they are to retreat; and you double your guards.

You must not however neglect the other parts of the works; for it may happen that the enemy, being informed by their spies, or your deserters or traitors, of your intended sortie, may attack you at one place, whilst you make a fall y at the other.

Your sortie must be made with troops who are to sustain one another, and each to execute punctually the orders you give them. Let them carry with their arms
such

such tools as are necessary for the work you appoint them to do.

Your cavalry may attack their guards in the rear, whilst your foot charges them in front and flank.

The advanced guard takes and keeps some post, during the time the others are performing what was intended; and it serves for a rear-guard when they retreat.

Counter-batteries.

You erect batteries against each of the enemy's batteries; and you endeavour to make them superior to theirs, for which end you sometimes erect cavaliers and platforms.

Out-works.

When you can keep them no longer, you mine, and then abandon
don

don them; and when the enemy is lodged on them, you spring your fougades, and immediately fall out on that side, to take advantage of their confusion.

You plant little pieces of cannon in the fausse-braye, opposite to the openings they make in the counterscarp; and you undermine likewise the edge of the fossé, the parapet of the cover'd way, or where the enemy may probably erect their batteries, to batter your flanks, or make their trenches.

If there be no fausse-braye, you make in the great fossé, and across it along the face of the bastion, another ditch of fifteen or twenty feet wide, and eight deep; and of the earth you take out make a good parapet, to which you give as little slope and as much height as possible.

You defend your fossé likewise by traverses, trenches, and re-traites: if it be by day, you ruin their gallery by your cannon, bombs, grenades, mill-stones, petards, burning or foudroying barrels, and other methods and materials.

Counter-mines.

You countermine, or blow up the mines of the enemy: you petard them; and bury their powder and saufages, and sometimes the miners; or you drive them out by the smoak of sulphur, or other suffocating stuff, if they are above you.

If you do not find the enemy's mine, you make another on the side of it, to which you set fire as soon as the enemy springs theirs and attacks you.

The

The counter-mines begin by a well you sink in the middle of the bastion; and when it is deep enough you make a grand taillade or opening; and three or four other wells, with communications one to the other. You then endeavour by different methods to know with certainty the place where the enemy are at work. For this purpose you make use of a grain-d'orge or borer of seven or eight feet long, and an inch thick, having its point well steel'd in form of a barley-corn: or you use a gimblet or wimble when the earth is loose. You perceive the light of their lamps through the holes you make, and then you must spring the mine. The shortest way is to do it by a petard; but you are to observe, that it will have no effect, if you apply it to a solid of earth above six feet.

Breaches.

Hinder as much as you can the enemy from reconnoitring your breach : repair them immediately with earth, fascines, dung, planks, barrels, palisades, pieces of timber, joists, &c.

Make the ascent as steep as possible ; make it besides slippery, and undermine it ; and have artificial fires and every thing ready for its defence.

Let your breach be defended with a good number of soldiers, bold and resolute ; and arm the most intrepid with armour proof against musket-ball.

Have ready likewise for your defence, short guns and pierriers, or mortars loaded with stones or pieces of old iron ; as likewise all sorts of combustible stuff, as oil, lime,

lime, and boiling pitch, tallow, and melted lead, burning sand, and every thing your imagination can suggest for the annoyance of the enemy.

Begin to intrench it as soon as you see the enemy are about to pass the fossé, and comes near the wall, or sooner.

There are several ways of intrenching yourselves; but to do it effectually there should be a fossé before your intrenchment; and let it be so far from the place where the enemy makes their effort, as not to be seen, damaged, or battered by them.

When you see the enemy open the counterscarp in several places, you reinforce your guards, and give but one night's rest to the soldiers, and keep your garrison always ready for battle.

The number of troops should always be sufficient for the defence of the breach, or attack.

You must have in your intrenchment a double number of soldiers, to refresh and relieve those who have sustained the attack for some time.

You are likewise to have a good number on the rampart near the attack; and the rest of your garrison is to be under arms on the parade, from whence you draw them as you want them, to sustain any post.

When you expect the enemy will storm your cover'd way, out-works, or breach, furnish your defences with all the firelocks you have in store, and powder and ball sufficient: let all the spare hands you have in the place be ordered to attend to load these arms as fast as your men can fire them;

them ; so will your defence be vigorous, the destruction of your enemy great, and probably their attempt frustrated.*

A discreet governor, and who foresees all things, takes care that the kill'd and wounded be immediately removed from the breach, and taken out of the fight of those who are fighting : for however brave your soldiers are, the continued sight of their wounded or dying comrades will damp their courage, and slacken their defence, so as to give the enemy possession of the breach if they push forward, at an easier rate.

It is not less important, if the assault be long and obstinate, and the fire smart, to refresh the soldiers covered with blood, sweat,

* Our army found the severe effects of this at the attack of the counterescarp of *Keyserwert* last war.

and dust, with a dram. These little comforts reanimate their courage, and send them back to the breach with fresh spirit and vigor.

If the burghers are affectionate, they serve for a guard in other places of the town, and near the breach; and if they will not fight, at least they may bring ammunition and refreshment to the soldiers, and may throw stones or artificial fires among the enemy.

During the attack you must not neglect other posts: and remember, the longer you defend the place, the more you prevent the enemy from undertaking other matters to the prejudice of your Prince. Take care not to surrender your honour with the town.*

Siege

* Forget not the brave defence the people of *London-derry* made against the *Irish*, who attacked it with a regular army and
artil-

Siege raised.

If the enemy are obliged to raise the siege, either because you have received succours, or from your obstinate defence, your garrison may make a sally on their rear-guard. Several good officers, however, have it as a maxim, that you should make a golden bridge for the enemy's retreat; and history sufficiently declares in their favour: therefore in this respect, you are to act as time, place, and circumstance direct you.

You immediately fill up their intrenchments, pull down or burn

artillery. See likewise *Reynack's* defence of *Brisac*, which lasted eight months, and during the siege provisions were so scarce, that he was forced to set sentinels in the church-yards to prevent the soldiers from digging up and eating the dead. See *Ramsay's Turenne*, Vol. I. p. 42.

their fascines, repair the breaches and other damaged works, and furnish yourself with every thing necessary for a new siege.

If you pursue the enemy, reconnoitre well the ground, and be jealous of ambuscades.

If they leave provisions in their camp, let them be tried, lest they be mix'd with poison: if they are, burn them.

Succours.

A General who marches to the relief of a place besieged, should send notice to the governor by letters or otherwise. This revives the courage of the garrison. He should make all the haste he can, to prevent the enemy's fortifying their camp, or carrying on their approaches.

You

You relieve a place besieged, by cutting off the enemy's provisions, by seizing some of their posts, or attacking some of their places, to oblige them by a diversion to raise the siege; or by throwing provisions into the place, of powder, victuals, or whatever they may want, or a reinforcement of men.

You send these refreshments into the town by surprize, or attacking some of their posts, or the enemy in their camp.

To introduce a relief by surprize, you march in the night through by-ways, and those least fortified and guarded: and if you are discovered, push on forthwith, and force your way.

Those within make a sortie at the same time, according as you have settled it with them; giving a false alarm at other places, to

keep the enemy *unquiet* and in uncertainty : and reconnoitre well the relief before they are admitted.

You carry your powder, or meal, in sacks which hold twenty or thirty pounds.

When you would relieve a place besieged with open force, as you draw nearer and nearer the town you fire some cannon, to let the garrison know you are coming.

If you would attack a post or quarter of the enemy, you endeavour to surprize it in the night : you alarm them in different places : you seize some eminence, on which you plant your cannon, which thunders on the part you would force, and makes your approach easy. You break their lines of defence, lay your bridges, and force your way by a vigorous attack.

You

You attack by trenches a fort separated from the enemy's camp, if it is of consequence to hinder your relieving the place.

Being certain of the places the least fortified and most neglected, gives you the easiest means of throwing in your succours: for the General the best informed has the greatest advantage over his enemy.

You should not forget, when you march to the relief of a place, to let it be reported abroad that you have a very numerous army; and to give appearance to this, you let your army in their march stretch as much ground as you can, by enlarging their intervals. The enemy is intimidated, consternation spreads in their camp, and they often raise the siege precipitately.

Capitu-

Capitulation.

When you are reduced to extremity, you must send an account of the condition of your place to your Prince: and to prevent being surprized by false letters or other inventions of the enemy, you must make use of a cypher agreed on before the siege. You send these letters by some very bold and faithful fellow, who is proof against bribes, and cannot be intimidated.

Assemble your council of war, lay before them the extreme necessity you are reduced to, the defects of the place, the state of the fortifications and breaches, the situation of the enemy, the want of stores, or any thing else for a longer defence. Add to what you have told them by word of mouth,
a written

a written account of your proceedings and accidents during the siege, the number of soldiers kill'd, and of those you have left; and in short, of every thing that should oblige you to capitulate. Let all this be signed by the officers of your garrison, and by the principal burghers: and after all is done, chuse the most prudent step, which is, to surrender from mere necessity, and an impossibility to defend the place longer; beat your chamade, and desire a capitulation.

Reciprocal hostages are sent. You ask, and sometimes obtain, several days, in which, if you are not relieved, you surrender according to your capitulation, which should be plain, intelligible, and without quibble, or double meanings.

What-

Whatever truce, cessation, or agreement you make, a prudent Governor will never go out of his place during the siege: on the contrary, he ought to be doubly diligent whilst they are parlying, reinforce his guards, and suspect a surprize.

The most honourable conditions of a capitulation are to march out, with arms and baggage, drums beating, colours flying, lighted matches, ball in mouth, with some pieces of cannon, and waggons of ammunition; and the prisoners given up on each side without ransom.

They should agree to allow you some waggons, for the carriage of your baggage and sick; with an escort to conduct you to the place agreed on, by a certain way, and
in

in a limited time.*

As to the sick and wounded who cannot bear being carried out, and you are obliged to leave in the hospitals, you stipulate for their security, that they shall be well treated, and that you may leave surgeons and others to attend them.

* For want of this precaution, *Santa Cruz* says, (Vol. I. p. 160.) that eight hundred *English*, *An.* 1707, who defended *Alcira* in *Spain*, capitulated to surrender the place, on condition that they should be escorted to *Lerida*, without mentioning by the shortest way, or a limited time, which should never be omitted in a capitulation. The *Spanish* General, taking the advantage of this error, did indeed escort them to *Lerida*, but by such round-about ways, that they were three months going where they might have march'd in the sixth part of the time; which he says was of great advantage, for they did not get to *Lerida*, till the *Spaniards* had made themselves masters of it, for want of having a sufficient body of foot in it.

The

190 *Military Memoirs, &c.*

The day your garrison is to march out, you draw them up in battalion in the great place; and all being ready, you order half your cavalry to march in front; the baggage, artillery, and infantry follows; the other half of your cavalry brings up the rear; and the governor is the last man who marches out.

The escort is made at the advanced guard, on the wings, and at the rear.

At the time your troops are marching out at one gate, the enemy marches in at the other.

And when you are arrived at the place agreed on, you send back their escort, and they send you your hostages.

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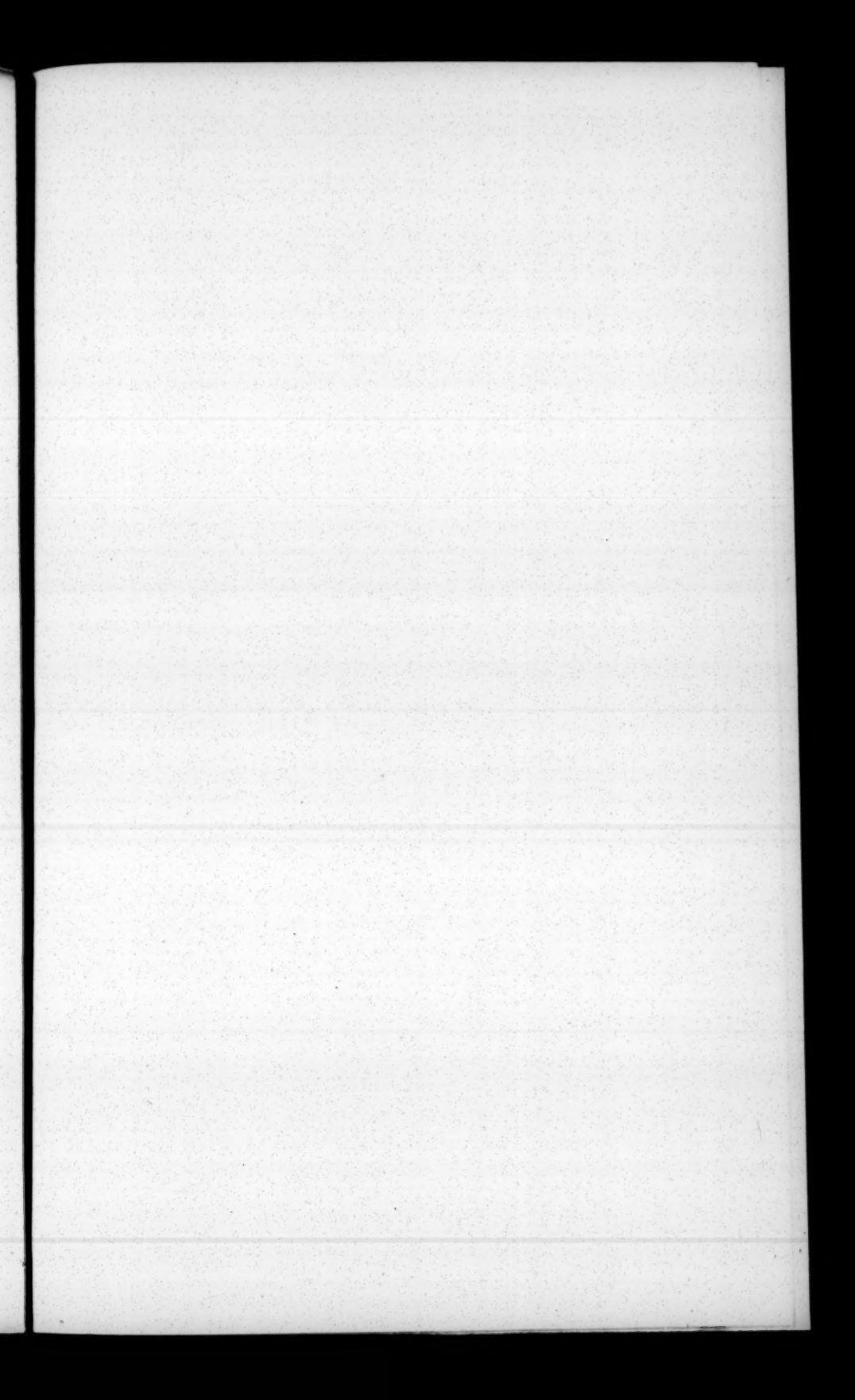
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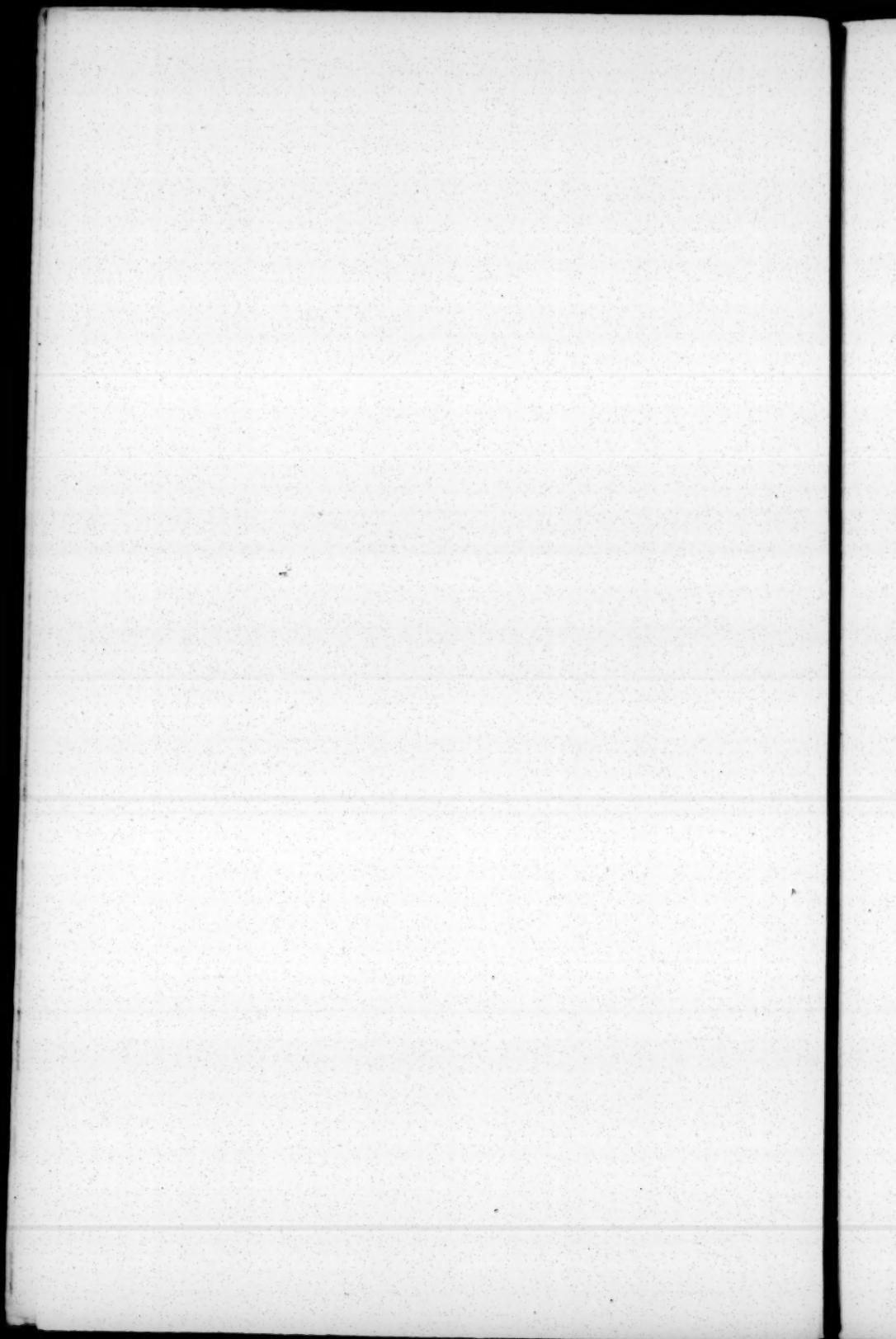
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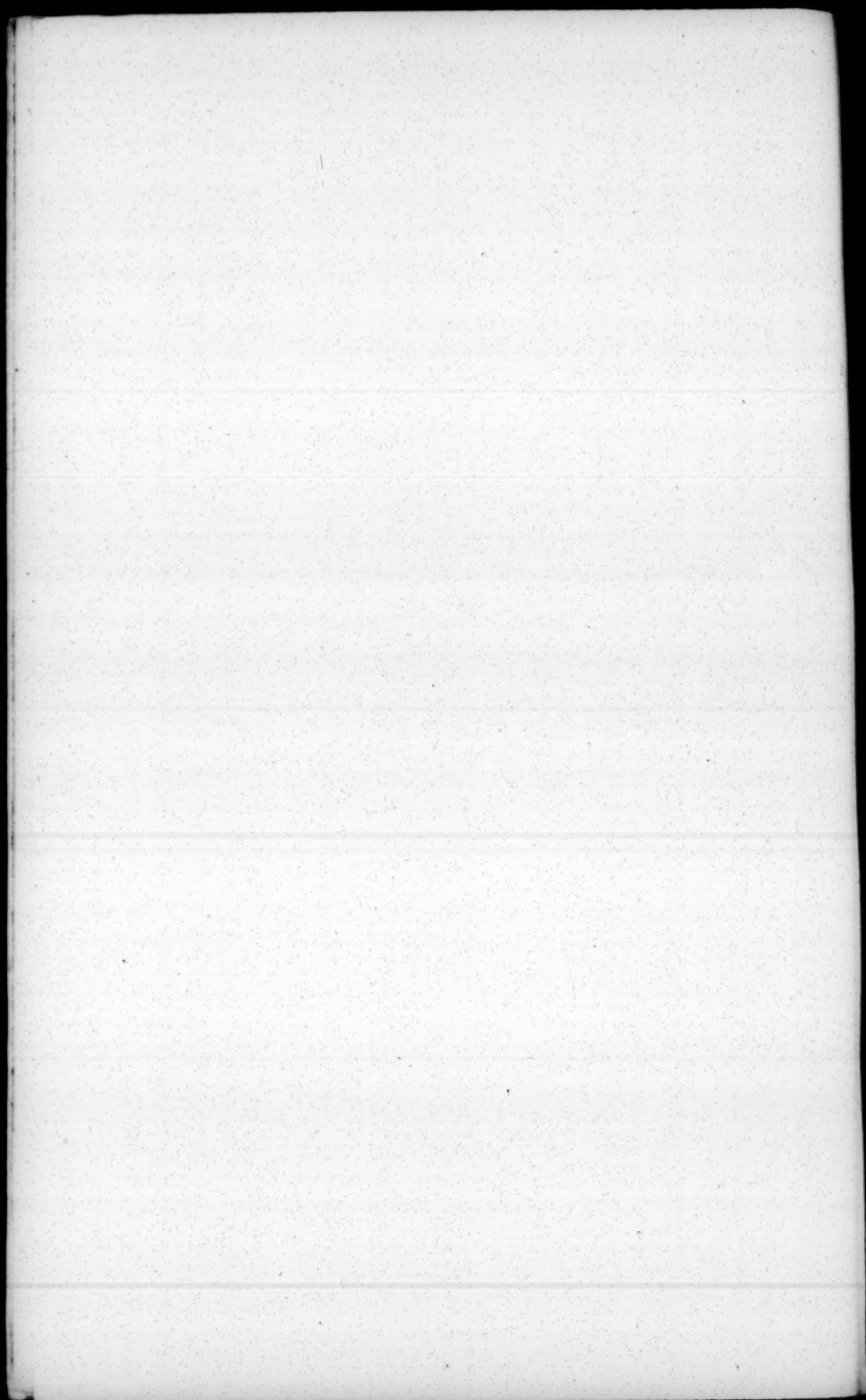
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